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NOTIFICATIONS BY GOVERNMENT

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MUNICIPAL ADMINISTRATION & URBAN DEVELOPMENT DEPARTMENT

MODEL BUILDING BYE-LAWS 2016 OF GOI–ANDHRA PRADESH BUILDING RULES, 2017

[G.O.Ms.No.119, Municipal Administration & Urban Development (H2) Department, 28th March, 2017]

NOTIFICATION

In exercise of the powers conferred by Section 585 read with 592 of the Andhra Pradesh Municipal Corporation Act, 1955 (adapted GHMC Act 1955); Section 18 of the Andhra Pradesh Municipal Corporations Act, 1994; Section 326 of the Andhra Pradesh Municipalities Act, 1965, Section 44 (1) of the Andhra Pradesh Town Planning Act,1920, Section 2 of A.P. Capital Region Development Authority Act, 2015 and Section 117 of Andhra Pradesh Metropolitan Region and Urban Development Authorities Act, 2016 and in supersession of all the existing rules on the subject, the Government of Andhra Pradesh hereby issue the following Rules.

CHAPTER – I

JURISDICTION, APPLICABILITY (ADMINISTRATION)

1. SHORT TITLE, APPLICABILITY AND COMMENCEMENT

(1) These Rules may be called **'The Andhra Pradesh Building Rules - 2017'**.

(2) They shall apply to the building activities in the areas falling in:

(a) Andhra Pradesh Capital Region Development Authority [APCRDA] except in Capital City Area,

(b) All Metropolitan Region Development Authorities,

(c) All Urban Development Authorities,

(d) All Municipal Corporations,

(e) All Municipalities,

(f) All Nagar Panchayats,

(g) Gram Panchayat areas covered in Master Plans/General Town Planning Schemes notified under Andhra Pradesh Town Planning Act,1920 and

(h) Industrial Area Local Authority (IALA)/Special Economic Zone (SEZ) notified by Government.

(3) All existing rules, regulations, byelaws, orders that are in conflict or inconsistent with these Rules shall stand modified to the extent of the provisions of these rules.

Subject to the provisions of the Act, these rules shall apply:

(a) to the planning, design and construction of building in case of erection of a building;

(b) to all parts of the building including change of roof whether removed or not, and in case of removal of whole or any part of the building;

(c) to the remaining part of the building after demolition and work involved in demolition in case of demolition of whole or any part of a building;

(d) to the whole building whether existing or new building (except only to that part of the building, which is consistent with these Regulations) in case of alteration of a building;

(e) to all parts of the building affected by the change in case of change of occupancy of a building; and

(f) to use of any land or building where sub-division of land is undertaken or use of land or building is changed.

(4) They shall come in to force from the date of publication in the Andhra Pradesh Gazette.

CHAPTER – II

DEFINITIONS

2. DEFINITIONS

In these rules, unless the context otherwise requires the definitions given below shall have the meaning indicated against each term. The terms and expressions which are not defined in these Rules shall have the same meaning as in the respective rules / regulations / Bye-laws of the respective local authorities and as defined in the National Building Code as the case may be, unless the context otherwise requires.

All mandatory Master Plan/Zonal Plan regulations regarding use, land use, coverage, FAR, set-back, open space, height, number of storeys, number of dwelling units, parking standards etc. for various categories of buildings including modification therein made from time to time shall be applicable mutatis mutandis in the Building Rules under this clause. All amendments /modifications made in the aforesaid regulations shall automatically stand deemed to have been included as part of these Rules.

(1) Access

A clear approach to a plot or a building.

(2) Act

The Act of the Local Body/Authority concerned.

(3) Accessory Building

A Building separated from the main building on a plot and containing one or more rooms for accessory use such as Servant's Quarter, Garage, Store rooms or such areas as may be classified by the Competent Authority.

(4) Accessory Use

Means any use of the premises subordinate to the principal use and customarily incidental to the principal use.

(5) Addition and/or alteration

A structural change including an addition to the area or change in height or the removal of part of building, or any change to the structure, such as the construction or removal or cutting into of any wall or part of a wall, partition, column, beam, joist, floor including a mezzanine floor or other support, or a change to or closing of any required means of access ingress or egress or a change to fixtures or equipment as provided in these Rules.

(6) Air Port Reference Point

Means a designated point which is established in the horizontal plane at or near the geometric center of the landing area.

(7) Amenity

Includes road, street, open space, park, recreational ground, playground, garden, water supply, electric supply, street lighting, sewerage, drainage, public works and other utilities, services and conveniences.

(8) Annealed Glass

Another term for "ordinary" glass, most commonly used for float glass.

(9) Auditorium

The accommodation provided for the public to view the cinematograph exhibitions/cultural activities etc.

(10) Authority having jurisdiction

The Authority which has been created by a statue and which, for the purpose of administering the Code/ Rules, may authorize a committee or an official or an agency to act on its behalf, hereinafter called the 'Authority'. Authority can be any Urban Local Body/Development Authority/Industrial Development Authority or any other authority as notified by the State Government as the case may be.

(11) Balcony

A horizontal cantilevered projection, including a handrail or balustrade, to serve a passage or as sit out place.

(12) Balustrade

A low wall forming a parapet to a stair, ramp, balcony, raised level, or a change in level.

(13) Barsati

A habitable room / rooms on the roof of the building with or without toilet / kitchen.

(14) Basement/Cellar

The lower storey of a building below or partly below the ground level, with one or more than one level and to be used for parking of vehicles.

(15) Beads or Glazing Beads

A strip of wood, metal or other suitable material attached to the rebate to retain the glass.

(16) Buffer area

(a) Means an area of land separating adjacent land uses that is managed for the purpose of mitigating impacts of one use on another.

(b) A buffer area consists of a separation distance and one or more buffer elements. Buffer element is a natural or artificial feature that mitigates an adverse impact; a buffer may include open ground, a vegetation buffer and or acoustic barrier.

(c) Buffer Area is the area within which certain structures / sensitive uses are either restricted or prohibited.

(17) Building

(a) A structure constructed with any materials whatsoever for any purpose, whether used for human habitation or not, and includes:-

(i) Foundation, plinth, walls, floors, chimneys, plumbing and building services, fixed platforms etc.

(ii) Verandahs, balconies, cornices, projections etc.

(iii) Parts of a building or anything affixed thereto

(iv) Any wall enclosing or intended to enclose any land or space, sign and outdoor display structures etc.

(v) Tanks constructed or fixed for storage of chemicals or chemicals in liquid form and for storage of water, effluent, swimming pool, ponds etc.

(vi) All types of buildings shall be considered to be "buildings", except tents, shamianas and tarpaulin shelters erected temporarily for temporary purposes and ceremonial occasions.

(b) Assembly Buildings

A building or part thereof, where groups of people congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes and these includes buildings of drama and Cinema theatres, drive-in-theatres, assembly halls, City halls, town halls, auditoria, kalyanamandapams, places of worship and road, railways, air, sea or other public transportation stations.

(c) Business Buildings

Includes any building or part thereof used principally for transaction of business and/or keeping of accounts and records therefore including offices, banks, professional establishments, court houses etc., if their principal function is transaction of business and/or keeping of books and records.

(d) Detached building

Includes a building with walls and roofs independent of any other building and with open spaces on all sides within the same plot.

(e) Educational Buildings

Includes a building exclusively used for a school or college involving assembly for instruction, education or recreation incidental to educational use, and including a building for such other uses as research institution.

(f) Existing Building

A building or structure existing authorisedly with the approval of the Authority before the commencement of these Rules.

(g) Hazardous Buildings

Includes a building or part thereof used for:

(i) Storage, handling, manufacture of processing of radioactive substances or of highly combustible or explosive materials or of products which are liable to burn with extreme rapidity and/or producing poisonous fumes or explosive emanations;

(ii) Storage, handling, manufacture or processing of which involves highly corrosive, toxic or noxious alkalis, acids, or other liquids, gases or chemicals producing flames, fumes and explosive mixtures etc., or which result in division of matter into fine particles capable of spontaneous ignition.

(h) High Rise Building

High Rise Building means a building with 18 meters and above (including stilt floor) in height. However, chimneys, cooling towers, boiler rooms/ lift machine rooms, cold storage and other non-working areas in case of industrial buildings and water tanks and architectural features in respect of other buildings may be permitted as a non-High rise Building.

(i) Industrial Buildings

Includes a building or part thereof wherein products or material are fabricated, assembled or processed, such as assembly plants, laboratories, power plants, refineries, gas plants, mills, dairies and factories etc.

(j) Institutional Buildings

Includes a building constructed by Government, semi-Government organizations or Registered Trusts and used for medical or other treatment, or for an auditorium or complex for cultural and allied activities or for an hospice, care of persons suffering from physical or mental illness, handicap, disease or infirmity, care of orphans, abandoned women, children and infants, convalescents, destitute or aged persons and for penal or correctional detention with restricted library of the inmates ordinarily providing sleeping accommodation and including dharamshalas, hospitals, sanatoria, custodial and penal institutions such as jails, prisons, mental hospitals, houses of correction, detention and reformatories etc.

(k) Mercantile/Commercial Building

Includes a building or part thereof used as shops, stores or markets for display and sale of wholesale or retail goods or merchandise, including office, storage and service facilities incidental thereto and located in the same building.

(l) Mixed use building

A building partly used for non-residential activities except industrial purpose and partly for residential purpose.

(m) Office Building (Premises)

Includes a building or premises or part thereof whose sole or principal use is for an office or for office purposes or clerical work. Office purposes include the purpose of administration, clerical work, handling money, telephone, and computer operation; and clerical work includes writing, book-keeping, sorting papers, typing, filling, duplicating, punching cards or tapes machine calculations, drawing of matter for publication and editorial preparation of matter for publication.

(n) Public Building

Public Building means a building used or intended to be used either ordinarily or occasionally as a place or public worship, dharamasala, college, school, theatre, cinema, public concert room, public hall, public bath, hospital, latrine, room, shop or any other place of public assembly.

(o) Residential Building

Residential Building includes a building in which sleeping and living accommodation is provided for normal residential purposes, with cooking facilities and includes one or more family dwellings, apartment houses, flats and private garages of such buildings.

(p) Semi-detached Building

Semi-detached Building means a building detached on the three sides with open spaces as specified.

(q) Storage Building

A building or part thereof used primarily for storage or shelter of goods, wares, merchandise and includes a building used as a warehouse, cold storage, freight depot, transit shed, store house, public garage, hanger, truck terminal, grain elevator, barn and stables.

(r) Unsafe Building

Includes a building which:

(i) is structurally unsafe, or

(ii) is unsanitary, or

(iii) is not provided with adequate means of ingress or egress or

(iv) constitutes a fire hazard or

(v) is dangerous to human life or

(vi) in relation to its existing use, constitutes a hazard to safety or health or public welfare by maintenance, dilapidation or abandonment

Note: All unsafe buildings/structures will be required to be restored by repairs, demolition or dealing with as otherwise directed by the Authority.

(s) Whole Sale Building/Establishment

An establishment wholly or partly engaged in wholesale trade and manufacture wholesale outlets, including related storage facilities, warehouses and establishments engaged in truck transport, including truck transport booking agencies.

(18) Building Height

The vertical distance measured

(a) In the case of flat roofs from the upper level of plinth and continuance to the highest point of the building excluding parapet wall, staircase room, lift

room and water tank. This shall be subject to concurrence of the A.P. State Disasters Response and Fire Services Department.

(b) In case of pitched roofs up to the point where the external surface of the outer wall intersects the finished surface of the sloping roof and

(c) In the case of gables facing the road, the mid- point between the eaves level and the ridge.

(d) Architectural features serving no other function except that of decoration shall be excluded from the purpose of measuring heights.

(e) In case of undulated terrain height can be considered as average of the corresponding formation level of the site.

(19) Building Line

The line up to which the plinth of building adjoining a street or an extension of a street or on a future street may lawfully extend and includes the lines prescribed, if any, in any scheme and/or development plan. The building line may change from time to time as decided by the Authority.

(20) Building set back

The distance by which any building or structure shall be separated from the boundary lines of the plot.

(21) Cabin

A non-residential enclosure constructed of non-load bearing partitions.

(22) Canopy

Shall mean a cantilevered projection from the face of the wall over an entry to the building at the lintel level provided that:

(a) It shall not project beyond the plot line.

(b) It shall not be lower than 2.3m or 7'-6" when measured from the ground.

There shall be no structure on it and the top shall remain open to sky.

(23) Carpet area

means the net usable floor area of an apartment, excluding the area covered by the external walls, areas under services shafts, exclusive balcony or verandah area and exclusive open terrace area, but includes the area covered by the internal partition walls of the apartment.

(24) Chair Rail

A fixed glazing bar, or rigid bar, that provides protection from human impact.

(25) Chajja

Chajja means a sloping or horizontal structural overhang usually provided over openings or external walls for providing protection from sun and rain or from architectural consideration.

(26) Chimney

An upright shaft containing one or more flues (smoke ducts) provided for the conveyance to the outer air of any product of combustion resulting from the operation of heat producing appliance or equipment employing solid, liquid or gaseous fuel.

(27) Chowk or Courtyard

means a fully or partially enclosed space permanently open to sky within a building at ground level and serves as lighting and ventilating space besides for outdoor activities, etc.

(28) Clean Industry

Industries which do not throw out any smoke, noise, offensive odour or harmful industrial wastes and employing not more than 40 workers with/without power and those not included in the list of polluting industries issued by concerned authorities.

(29) Clear Glass

Transparent glass.

(30) Combustible material

The material which when burnt adds heat to a fire when tested for combustibility in accordance with the IS 3008-1966 Method of Test for Combustibility of Building Materials, National Building Code.

(31) Common areas mean:

(a) the entire land for the real estate project or where the project is developed in phases, the entire land for that phase;
(b) the stair cases, lifts, staircase and lift lobbies, fire escapes, and common entrances and exits of buildings;
(c) the common basements, terraces, parks, play areas, open parking areas and common storage spaces;
(d) the premises for the lodging of persons employed for the management of the property including accommodation for watch and ward staffs or for the lodging of community service personnel;
(e) installations of central services such as electricity, gas, water and sanitation, air-conditioning and incinerating, system for water conservation and renewable energy;
(f) the water tanks, sumps, motors, fans, compressors, ducts and all apparatus connected with installations for common use;
(g) all community and commercial facilities as provided in the real estate project;
(h) all other portion of the project necessary or convenient for its maintenance, safety, etc., and in common use;

(32) 'Competent Authority' means:

(a) The Commissioner of the Andhra Pradesh Capital Region Development Authority;
(b) The Metropolitan Commissioner of the respective Metropolitan Region Development Authority;
(c) The Vice Chairman of the respective Urban Development Authority;
(d) The Director of Town & Country Planning in case of Local Authorities not covered in Development Authorities and Gram Panchayat areas covered in Master Plans / General Town Planning Schemes notified under Andhra Pradesh Town Planning Act, 1920.

(33) Congested Area

Congested Area means the areas falling in the Local Authority notified by the Competent Authority based on the existing development.

(34) Conversion

The change from one occupancy to other occupancy or any change in building structure or part thereof resulting in a change of space and use requiring additional occupancy certificate.

(35) Corner site

Means a site at the junction of and fronting on two or more intersecting streets.

(36) Cornice

Means a sloping or horizontal structural overhang usually provided over openings or external walls to provide protection from sun and rain.

(37) Corridor

Corridor means a common passage or circulation space including a common entrance hall in a building;

(38) Cottage Industry" or "Customary Home Occupation

means a home occupation customarily carried out by a member of the family residing in the premises without employing hired labor, without display of goods, and which shall be non-hazardous and not affecting the safety of the inhabitants of the building and the neighborhood, provided that no mechanical equipment is used except that as is customarily used for purely domestic or household purposes and/or employing licensable goods. If power is used, the total electricity load shall not exceed 10 H.P.

(39) Covered Area

means built up area covered immediately above the plinth level by the building but does not include the area covered by compound wall, gate, cantilevered porch, portico, slide swing, chajjas and the like.

(40) Damp Proof Course

A course consisting of some appropriate water proofing material being provided to prevent penetration of dampness or moisture.

(41) Density

The residential density expressed in terms of the number of dwelling units per hectare.

NOTE: Where such densities are expressed exclusive of community facilities and provision of open spaces and major roads (excluding incidental open spaces) these will be net residential densities. Where these densities are expressed taking into consideration the required open space provision and community facilities and major roads, these would be gross residential densities at neighborhood level, sector level or town level, as the case may be. The provision of open spaces and community facilities will depend on the size of the residential community. Incidental open spaces are mainly open spaces required to be left around and in between two buildings to provide lighting and ventilation.

(42) "Developer" means,

(a) a person who constructs or causes to be constructed an independent building or a building consisting of apartments, or converts an existing building or a part thereof into apartments, for the purpose of selling all or some of the apartments to other persons and includes his assignees; or

(b) a person who develops land into a project, whether or not the person also constructs structures on any of the plots, for the purpose of selling to other persons all or some of the plots in the said project, whether with or without structures thereon; or

(c) any development authority or any other public body in respect of allottees of—

(i) buildings or apartments, as the case may be, constructed by such authority or body on lands owned by them or placed at their disposal by the Government, or

(ii) plots owned by such authority or body or placed at their disposal by the Government,

for the purpose of selling all or some of the apartments or plots; or

(d) an apex State level co-operative housing finance society and a primary co-operative housing society which constructs apartments or buildings for its members or in respect of the allottees of such apartments or buildings; or

(e) any other person who acts himself as a builder, coloniser, contractor, promoter, estate developer or by any other name or claims to be acting as the holder of a power of attorney from the owner of the land on which the building or apartment is constructed or plot is developed for sale; or

(f) such other person who constructs any building or apartment for sale to the general public.

Explanation.—For the purposes of this clause, where the person who constructs or converts a building into apartments or develops a plot for sale and the persons who sells apartments or plots are different persons, both of them shall be deemed to be the promoters and shall be jointly liable as such for the functions and responsibilities specified in these rules;

(43) Development

Development means the carrying out of building, engineering, mining or other operations in, or over, or under land and water, or in the use of any building or land, and includes redevelopment and layout and subdivision of any land; and 'to develop' shall be construed accordingly.

(44) Development Charge

Development Charge means a charge levied by the competent authority under the relevant provisions of the Law.

(45) Development Plan

Development Plan means a plan for the Development or redevelopment or improvement of the area within the jurisdiction of Authority and includes Perspective Plan, Master Plan, Zonal Development Plan and part Zonal Plan /Area Development Plan prepared under the relevant Acts.

(46) Door

Door, Center Opening Sliding - A door which slides horizontally and consists of two or more panels which open from the center and are usually so interconnected that they move simultaneously.

(47) Double Glazing

Glazing that incorporates two panels, separated with an air space, for the purpose of sound insulation or thermal insulation or both.

(48) Drain

A system of line of pipes, with their fittings and accessories, such as manholes, inspection chambers, traps, gullies, floor traps used for drainage of building or yards appurtenant to the buildings with the same cartilage. It includes an open channel for conveying surface water or a system for the removal of any liquid.

(49) Drainage

A system constructed for the purpose of removal of any waste water.

(50) Dwelling

A building or a portion thereof which is designed or used wholly or principally for residential purposes for one family. This shall not include boarding or rooming houses, tents, tourist camps, hotels or other structures designed or used primarily for transient residents.

(51) Dwelling Unit

Independent housing unit, with separate facilities for living, cooking and sanitary requirements.

(52) Edge Polished

Usually applied to flat glass, the edges of which have been polished after cutting.

(53) Egress

A way out or exit.

(54) Encroachment

Means an act to enter into the possession or rights either of permanent or temporary nature on a land or built up property of local body or state/central Government.

(55) Energy Conservation Building Code or ECBC

The Energy Conservation Building Code (2008) when locally adapted to Andhra Pradesh's climate is termed as the "Andhra Pradesh Energy Conservation Building Code (APECBC)." All definitions included in the Energy Conservation Building Code (2008) and not otherwise defined herein are applicable as amended from time to time.

(56) 'Enforcement Authority' means:

(a) The Commissioner of the Andhra Pradesh Capital Region Development Authority;
(b) The Metropolitan Commissioner of the respective Metropolitan Region Development Authority;
(c) The Vice Chairman of the respective Urban Development Authority;
(d) The Commissioner of respective Urban Local Body;
(e) The Executive Authority of the Gram Panchayat;

(f) The Executive Authority of the Special Unit created as the case may be for the purpose of sanctioning and monitoring building and development activity, as applicable.

(57) Escalator

A power driven, inclined, continuous stairway used for raising or lowering passengers.

(58) Escalator Landing

The portion of the building or structure which is used to receive or discharge passengers into or from an escalator.

(59) Escape Lighting

That part of emergency lighting which is provided to ensure that the escape route is illuminated with radium paint at all material times, for example, at all times when persons are on the premises, or at times the main lighting is not available, either for the whole building or for the escape routes.

(60) Existing Use

Use of a building or structure existing authorized with the approval of the Authority before the commencement of these Rules.

(61) Exit

A passage channel or means of egress from the building, its storey or floor to a street or, other open space of safety; whether horizontal, outside and vertical exits means as under:-

(a) Horizontal exit means an exit, which is a protected opening through or around a fire well or bridge connecting two or more buildings.

(b) Outside exit means an exit from building to a public way to an open area leading to a public way or to an enclosed fire resistant passage leading to a public way.

(c) Vertical exit means an exit used for ascending or descending between two or more levels including stairway, fire towers, ramps and fire escapes.

(62) Exposed edge

A glass edge that is not covered.

(63) External wall

An outer wall of a building not being a party wall even though adjoining to a wall of another building and also means a wall abutting on an interior open space of any building.

(64) Faceted Glazing

Flat panes of glass installed vertical at an angle to each other, to from a faceted curve.

(65) Fencing

A barrier of a plant or construction material used to set off the boundary of an area and to restrict visual or physical passage in or out of it.

(66) Fin

A piece of glass positioned and fastened to provide lateral support.

(67) Fire Resistance

Fire Resistance is a property of an element of building construction and is the measure of its ability to satisfy for a stated period some or all of the following criteria:

(a) Resistance to collapse
(b) Resistance to penetration of flame and hot gases and
(c) Resistance to temperature rise on the unexposed face up to a maximum of 180^0 and/or average temperature of $150^{0.}$

(68) Fire Resistant Rating

means the time during which a fire resistant material i.e. materiel having a certain degree of fire resistant, fulfills its function of contributing to the fire safety of a Building when subjected to prescribe conditions of heat and load or restraint. The fire Resistance test of structures shall be done in accordance with IS 3809-1966 fire Resistance Test of structure.

(69) Fire separation

It means the distance in meter measured from any other building on the site or from another site or from the opposite side of a street or other public space to the building.

(70) Fire Tower

Means an enclosed staircase that can only be approached from the various floors through landings or lobbies separated from both the floor area and the staircase by fire resistant doors and open to the outer air**.**

(71) Flat Glass

A general term covering sheet glass, float glass and various forms of rolled and plate Glass.

(72) Float Glass

A form of flat glass produced by reheating the continuous ribbon of glass whilst it floats over a bath of molten metal.

(73) Floor

Means the lower surface of any storey on which one normally walks in a building.

Note: *The sequential number of floors shall be determined by its relation to the determining entrance level. For floor at or wholly above ground level the lowest floor in the building with direct entrance from the road/street shall be termed as Ground Floor. The other floors above Ground Floor shall be numbered in sequence as floor 1, floor 2 etc., with number increasing upwards. Similarly floors below ground levels shall be termed Basement floor 1, Basement floor 2 with number increasing downwards.*

(74) Floor Area

means covered area of a building at any floor level.

(75) Floor Area Ratio (FAR)

means the quotient obtained by dividing the total covered area (plinth area) on all floors, by the area of the plot.

F.A.R. = Total covered areas on all floors

Plot area

(76) Footing

A foundation unit constructed in brick work or stone masonry or concrete under the base of a wall or column for the purpose of distributing the load over a large area.

(77) Foundation

That part of the structure, which is in direct contact with ground and transmit loads over it.

A substructure supporting an arrangement of columns or walls in a row or rows transmitting the loads to the soil.

(78) Frame

A structure manufactured from timber, metal, glass or other durable material or Combinations of materials such as glass fine and structural sealant, supporting the full Length of a glazed panel edge.

(79) Fully framed glazing

Panels that have all edges framed.

(80) Gallery

An intermediate floor or platform projecting from a wall of an auditorium or a hall providing extra floor area, and/additional seating accommodation and includes the structures provided for seating in stadium.

(81) Garage, Private

Garage, Private means a building or portion thereof designed and used for parking of private owned motor driven or other vehicles.

(82) Garage -Public

A building or portion thereof, designed other than as a private garage, operated for gain, designed and/or used for repairing, servicing, using, selling or storing or parking motor driven or other vehicles.

(83) Gated Community Development

Means an exclusive housing development in an area with compound wall, access through gates and having their own facilities and amenities. The housing units may comprise of Apartment blocks, detached, semi-detached or row houses with or without combinations.

(84) Glass

An inorganic, non-metallic produced by the complete fusion of raw materials at high temperatures, in to a homogeneous liquid, which is then cooled to a rigid, condition essentially without crystallization.

(85) Glazing

The securing of glass in prepared openings in windows, door panels, partitions and the like.

(86) Gradient

The degree of slope of a pipe invert or road or land surface. The gradient is a measure of the slope height as related to its base. The slope is expressed in terms of percentage or ratio.

(87) **'Group Development Scheme'** is reckoned as development of Buildings for any use in a Campus or Site of 4000sq.m and above in area and could be row houses, semi-detached, detached Houses, Apartment blocks or High-Rise buildings or mix or combination of the above.

(88) **Group Housing/Apartment**

Means a building having five or more multiple dwelling units/apartments and common services on a given site or plot of less than 4,000 sq.mts. in single or multiple blocks each building containing two or more apartments or with total of five or more units/apartments, without customary sub-division of land by way of individual plots.

(89) **Guarding**

Glass used to prevent people falling wherever there is a change in floor level by means of a permanent barrier.

(90) **Heat Strengthened Glass**

Glass which has been heated past its softening point and chilled rapidly to increase its strength and make it thermally safe, but which breaks like annealed glass.

(91) **Heat strengthened laminated safety Glass**

Laminated safety Glass utilizing two or more panels of heat- strengthened glass in the makeup.

(92) **Ingress**

A way in or entrance.

(93) **Insulating Glass Unit (IGU)**

The standard configuration for residential and commercial windows consisting of a sealed unit of two panes of glass separated by a metal spacer.

(94) **Jhamp**

A down ward, vertical or sloping projection hanging below any horizontal projection like balcony, canopy, verandah, passage etc., to provide protection from direct sun and rain.

(95) **Kerb**

A concrete or stone edging along a pathway or road often constructed with a channel to guide the flow of storm water and thereby serve individual purpose.

(96) **Laminated Glass**

A composite material consisting of two or more sheets of glass permanently bonded together by a plastic interlayer material.

(97) **Landscape, Hard**

Civil work component of landscape architecture such as pavement, walkways, roads, retaining walls, sculpture, street amenities, fountains and other built environments.

(98) **Landscape**, **Soft**

The natural elements in landscape design, such as plant materials and the soil itself.

(99) **Layout**

Layout means the laying out a parcel of land or lands into building plots with laying of road/ streets with formation, leveling, metalling or black topping or paving of the roads and footpaths etc., and laying of the services such as water supply, drainage, street lighting, open spaces avenue plantation etc.

(100) Ledge or Tand

A shelf-like projection supported in any manner whatsoever except by vertical supports within a room itself but without a projection of more than half a meter.

(101) Licensed/Registered Architect / Engineer / Landscape Architect / Structural Engineer / Supervisor / Town Planner / Urban Designer

Means a qualified Architect/Engineer/Landscape Architect/Structural Engineer/Supervisor/Town Planner/Urban Designer who has been licensed/registered by the Local Authority or by the body governing such profession and constituted under a statute.

(102) Lift

An appliance designed to transport persons or materials between two or more levels in a vertical or substantially vertical direction by means of a guided car or platform. The word 'elevator' is also synonymously used for 'lift'.

(a) Fire Lift

Means a special lift designed for the use of fire service personnel in the event of fire or other agency.

(b) Goods Lift

A lift designed primarily for the transport of goods, but which may carry a lift attended or other persons necessary for the loading or unloading of goods.

(c) Hospital Lift

A lift normally installed in a hospital/ dispensary/ clinic and designed to accommodate one number bed/stretcher along its depth, with sufficient space around to carry a minimum of three attendants in addition to the lift operator.

(d) Passenger Lift

A lift designed for the transport of passengers

(e) Service Lift

A passenger cum good lift meant to carry goods along with people. Typically in an office building this may be required to carry food or stationers, in a residential building to carry a bureau or accommodate a stretcher and in a hotel to be used for food trolleys or baggage. There is a need in such lifts, to take care of the dimensions of the car and the door clear opening in line with the type of goods that may have to be carried based on mutual discussion between supplier and customer. Also, such lifts shall have buffer railings in the car at suitable height to prevent damage to the car panels when the goods are transported. Topically such lifts, if provided with an automatic door, may use some means to detect trolleys and stretcher movement in advance to protect the doors against damage. The car floors load calculations and car area of such a lift is as in the case

of a passenger lift except that these are not meant to carry heavy concentrated loads.

(103) Light Industry

Light Industry means Industries which do not throw out excessive smoke, noise, offensive odor or harmful industrial wastes, employing not more than100 workers and using power of not more than 100 H.P. Such Industries except in the case of foundries and smithies do not consume any solid fuel.

(104) Lobby

Means a covered space in which all the adjoining rooms open.

(105) Local Authority means:

(a) a Municipal Corporation constituted under the respective Act; or

(b) a Municipality or a Nagar Panchayat constituted under the Andhra Pradesh Municipalities Act, 1965; or

(c) a Gram Panchayat constituted under the Andhra Pradesh Panchayat Raj Act, 1994; or

(d) any other body or authority constituted under the relevant Act to govern the urban services.

(106) Loft

An intermediate floor between two floors or a residual space in a pitched roof above normal level constructed for storage with maximum clear height of 1.5 meter.

(107) Low cost housing

Low cost housing means housing development and schemes for socially and economically weaker/ backward sections of the society at affordable costs of built-up area and service. The requirements and construction specifications are as specified by the Government from time to time.

(108) Manifestation

Any technique for enhancing a person’s awareness of the presence of transparent glazed areas.

(109) Master Plan/General Town Planning [GTP] Scheme

A Master Plan/General Town Planning [GTP] Scheme formulated under any relevant Act for any area/settlement approved by the Government.

(110) Means of Access

Means an access to a building or plot from an existing public street or road through a road/ street/ pathway.

(111) Means of Escape

An escape route provided in a building for safe evacuation of occupants.

(112) Mezzanine Floor

An intermediate floor, not being a loft, between the floor and ceiling of any storey and its area shall not be more than 1/3rd of the area of the floor.

(113) Mirror

A piece of glass silvered on one side, with a protective paint coating.

(114) Multi-level Car Parking Building (Parking complex/Parking lot)

A building may be partly below ground level having two or more basements or above ground level, primarily to be used for parking of cars, scooters or any other type of light motorized vehicle. Premises either built or open which is utilized purely for parking of vehicles permitted in specific areas.

(115) Multiplex Complex

means an integrated entertainment and shopping center/complex of a shopping mall and having at least three (3) cinema halls/screens. Apart from Cinema Halls, the entertainment area may have restaurants, cafeteria, fast food outlets, video games parlors, pubs, bowling alleys, health spa/centers, convention centers, hotels and other recreational activities and IT Offices. However, habitable areas like hotels, service apartments shall not be allowed in the same block where the Multiplexes are set up and shall be allowed only as a separate block. Such a Complex may be spread over the site or be in one or more blocks which may be high-rise buildings or normal buildings.

(116) Mumty or Stair-cover

A structure with a covering roof over a staircase and its landing built to enclose only the stairs for the purpose of providing protection from weather and not used for human habitation.

(117) Non-combustible

means not liable to burn to add heat to a fire when tested for combustibility in accordance with the IS: 3808-1966 - Method of Test for Combustibility of Building Materials.

(118) Non confirming building or use

A building, structure or use of land existing at the time of commencement of the regulations and which does not conform to the regulations pertaining to the zone in which is situated.

(119) Occupancy Certificate

Means the occupancy certificate issued by the competent authority permitting occupation of any building, as provided under local laws which has provision for civic infrastructure such as water, sanitation and electricity.

(120) Occupancy mixed

The occupancy, where more than one occupancy are present in different portions of the building.

(121) Occupancy of Use Group

The principal occupancy for which a building or a part of a building is used or intended to be used for the purposes or classification of building according to the occupancy. Any occupancy shall be deemed to include subsidiary occupancies, which are contingent upon it.

(122) Occupier

Occupier includes any person for the time being, payable or liable to pay rent or any portion or rent of the building in respect of which the ward is used, or compensation or premium on account of the occupation of such building and also a rent-free tenant, but does not include a lodger, and the words 'occupy'

and 'occupation' do not refer to the lodger. An owner living in or otherwise using his own building shall be deemed to be the occupier thereof.

(123) Open Space

An area forming an integral part of a site left open to the sky.

(124) Open Space - Front

An open space across the front of a plot between the building line and front boundary of the plot.

(125) Open Space - Rear

An open space across the rear of a plot between the building line and rear boundary of the plot.

(126) Open Space - Sides

An open space across the side of the plot between the side of the building and side boundary of the plot.

(127) Operational Construction/Installation

A construction/ installation put up by the Government Departments for the operational purposes.

(128) Owner

Owner in relation to any property, includes any person who is, for the time being receiving or entitled to receive, whether on his own account or on account of or on behalf of, or for the benefit of any other person or as an agent, trustee, guardian, manager or receiver for any other person or for any religious or charitable institution, the rents or profits of the property and also includes a mortgagee in possession thereof; and also includes a person, company, trust, institute, registered body, State or Central Government and its attached subordinate departments, undertakings and the like in whose name the property rights are vested.

Note: The term Owner is synonymous with the term "Applicant".

(129) Pane

Single piece of glass cut to size for glazing.

(130) Panel

An assembly containing one or more panes.

(131) Parapet

A low wall or railing built along the edge of a roof or floor.

(132) 'Parking Complex/Parking Lot'

means premises either built or open which is utilized purely for parking of vehicles permitted in specific areas.

(133) Parking Space

Parking space means an area enclosed or unenclosed, covered or open, sufficient in size to park vehicles, together with a drive-way connections, the parking space with a street or alley and permitting ingress and egress of the vehicles.

(134) Partition

It means an interior non-load bearing divider, one storey or part storey in height.

(135) Party Wall

(a) A wall forming part of a building and being used or constructed to be used in any part of the height or length of such wall for separation of adjoining buildings belonging to different owners or constructed or adopted to be occupied by different persons; or

(b) A wall forming part of a building and standing in any part of the length of such wall, to a greater extent that the projection of the footing on one side or ground of different owners.

(136) Permanent Open Air Space

Air Space is deemed to be permanently open if:

(a) it is a street or it is encroached upon by no structure of any kind: and

(b) its freedom from encroachment in future by a structure of any kind is assured either by law or by contract of by the fact that the ground below it is a street or is permanently and irrevocably appropriated as an open space:

Provided that in determining the open air space required in connection with construction work on a building any space occupied by an existing structure may, if it is ultimately to become a permanently open air space, be treated as if it were already a permanently open space.

(137) Permission or Permit

A valid permission or authorization in writing by the competent authority to carryout development or a work regulated by these Rules.

(138) Plinth

Means the portion of a structure between the level of the surrounding ground and level of floor, immediately above the ground. In no case this shall be less than 450mm.

(139) Plinth Area

Plinth area means the built up covered area measured at the floor level of the basement or of any storey.

(140) Plot / Site

Means a continuous portion of land held in a single or joint ownership other than the land used, allotted, earmarked or set apart for any street, lane, passage, pathway, conservancy lane or for any other public purpose.

(141) Plot Coverage

Means the ground area covered by the building and does not include the area covered by compound wall, gate, cantilever porch, chajja, well, septic tank, open platform and the like. It is expressed as percentage of the site/plot area;

(142) Porch

Means a roof cover supported on pillars or cantilevered for the purpose of pedestrian or vehicular approach to a building.

(143) Prescribed

Prescribed means prescribed by rules made under the Act.

(144) Ramp

A sloping surface joining two different levels, as at the entrance or between floors of a building.

(145) Reconstituted Plot

Reconstituted Plot means a plot which is in any way altered by the making of a town-planning scheme otherwise than by the severance of land used, allotted or reserved for any public or municipal purpose.

(146) Refuge Area

An area where persons unable to use stairways can remain temporarily and await instruction or assistance during emergency evacuation situation.

(147) Residual protection

It is the protection provided to avoid the impact of human being to glass. It is provided on the side of glass where there are chances of Human impact. It can be achieved by providing a sill structure or a grill inside.

(148) Responsible Authority

Responsible Authority means "the authority or person, who is specified in a scheme as responsible for carrying out or enforcing the observance of all or any of the provisions of the scheme or for enforcing the execution of any works which under the scheme are to be executed by any authority, owner, or other person.

(149) Retention Activity

An activity or use which is allowed to continue, notwithstanding its non-conforming nature in relation to the use permitted in the adjoining or surrounding area.

(150) Road Width or Width of Road/Street

The whole extent of space within the boundaries of a road when applied to a new road/street as laid down in the city survey or development plan or prescribed road lines by any act of law and measured at right angles to the course or intended course of directions of such road.

(151) Room Height

The vertical distance measured from the finished floor surface to the finished ceiling / slab surface.

(152) Row Houses

Row Buildings means a row of houses with only front, rear and interior open spaces.

(153) Safety organic-coated

A glazing material consisting of a piece of glass coated and permanently bonded on one or both sides with a continuous polymeric coating, sheet or film, which meets the test requirements of the safety glazing standards.

(154) 'Sanctioning Authority' means:

(a) The Commissioner of the Andhra Pradesh Capital Region Development Authority;

(b) The Metropolitan Commissioner of the respective Metropolitan Region Development Authority;
(c) The Vice Chairman of the respective Urban Development Authority;
(d) The Commissioner of respective Urban Local Body;
(e) The Executive Authority of the Gram Panchayat;
(f) The Executive Authority of the Special Unit created as the case may be for the purpose of sanctioning and monitoring building and development activity, as applicable.

(155) Sanctioned Plan

Means the set of plans such as site plan, building plan, service plan, parking and circulation plan, landscape plan, layout plan, zoning plan and such other plan and includes structural designs, if applicable, permissions such as environment permission and such other permissions, and specifications submitted under the Rules in connection with a building/project and which are approved and sanctioned by the authority prior to start of the building/project.

(156) Scheme

Scheme means a town-planning scheme / land pooling scheme and includes a plan relating to a town planning scheme / land pooling scheme.

(157) Screen

A vegetative or constructed hedge or fence used to block wind, undesirable views, noise, glare and the like, as part of in landscape design; also known as ' screen planting' and 'buffer plantation'.

(158) Service Industry

Industries which are not engaged in the manufacture of goods or articles, but are mainly concerned with the repair, maintenance, servicing and/or/other jobbing work.

(159) Service road

Means a lane from a wider street provided at the front of a plot for service purposes.

(160) Set back

Means the space to be left fully open to sky from the edge of the building to the property line or boundary of the street. No built-up space shall be provided within the setback except specifically permitted projections and other structures under the rules.

(161) Settlement

A human settlement, whether urban or rural in character. It includes habited villages, towns, townships, cities and the areas notified under the control of the Authority.

(162) Shower doors, shower screens and bath enclosures

The panels, doors or windows are enclosing or partially enclosing a shower or bath.

(163) Side Panel

A panel (operable or inoperable) located adjacent to a doorway. It may or may not be in the same plane as the doorway.

(164) Sign

Any device visible from a public place that displays either commercial or non-commercial message by means of graphic presentation of alphabetic or pictorial symbols or representations. Non-commercial flags or any flags displayed from flagpoles or staffs shall not be considered as signs.

(165) Sign Structure

Any structure supporting a sign.

(166) Site Depth of

Site depth of means the mean horizontal distance between the front and rear site boundaries.

(167) Site Double Frontage

Site Double Frontage means a site, having a frontage on two streets other than a corner plot.

(168) Site for building

It includes all the land within the cartilage of the building if forming it appurtenance such as outbuildings, yard, with open space and garden attached thereto or intended to be occupied therewith.

(169) Site, Interior or Tandem

Site, Interior or Tandem means a site access to which, is by a passage from a street whether such passage forms part of the site or not.

(170) Sloped overhead glazing

Glazing that is inclined at less than 75 degrees to the horizontal and located, wholly or partially, directly above an area that may be used by people.

(171) Span

The dimension between supports. For panels supported on all four edges, it corresponds to the smaller of the sight size dimensions.

(172) Staircase

Means of access between two floors.

The width of staircase may be fixed by the Competent Authority in relation to the number of floors and the total number of users and in no case it should be less than 1M in width and minimum of 25Cm of Treads and 17.5Cm of maximum rise and shall have direct ventilation. In the case of public buildings, a staircase shall be provided for every 300 persons who are expected to use the building.

(a) Enclosed Staircase

Means a staircase separated by fire resistant walls and doors from the rest of the building.

(b) Spiral Staircase

A staircase forming continues winding curve round a central point or axis having treaded without risers.

(173) Storey

The portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above it, then the space between any floor and the ceiling next above it.

(174) Street/Road

Any highway, street, land, pathway, alley, stairway, passageway, carriage-way, footway, square, place or bridge whether a thorough-fare or over which the public have a right of passage or access or have passed and have access uninterruptedly for specified period, whether existing or proposed in any scheme and includes all bends, channels, ditches, storm water drains, culverts sidewalks, traffic islands, roadside trees and hedges, retaining walls fences, barriers and railing within the street lines.

(175) Street/Road level or Grade

Street level or Grade means the officially established elevation of grade of the central line of the street upon which a plot fronts and if there is no officially established grade, the existing grade of the street its mid-point.

(176) Street/Road Line

Street Line means the line defining the side limits of a road/street.

(177) To Abut

Means to abut on a road such that any portion of the building is fronting on the road.

(178) To Erect

In relation to a building means:

(a) to erect a new building on any site whether previously built upon or not;

(b) to re-erect any building of which portions above the plinth level have been pulled down, burnt or destroyed

(c) conversion from one occupancy to another

(d) to carryout alterations.

(179) Toughened laminated safety glass

Laminated safety glass utilizing two panels of toughened safety glass in the make up.

(180) Tower like structures

Structures shall be deemed to be tower-like structures when the height of the tower-like portion is at least twice the height of the broader base at ground level.

(181) Transferable Development Rights (TDR)

An award specifying the built up area an owner of a site or plot can sell or dispose or utilize elsewhere, whose site or plot is required to be set apart or affected for a community amenity or development for public purpose in the Master Plan or in road widening or covered in recreational use zone etc. The award would be in the form of a TDR Certificate issued by the Competent Authority.

(182) Travel Distance

Means the distance an occupant has to travel to reach an exit.

(183) Unauthorized Construction

Means the erection or re-erection, addition or alternations which is not approved or sanctioned by the Concerned Authority.

(184) Underground/Overhead Tank

An underground/overhead water tank constructed or placed to store water.

(185) Ventilation

Shall mean the supply of outside air into a building through window or other openings due to wind outside and convection effects arising from temperature or vapor pressure differences (or both) between inside and outside of the building.

(186) Verandah

A covered area with at least one side open to the outside with the exception of 1 m high parapet on the upper floors to be provided on the open side.

(187) Village Settlement or Grama Khantam or Agraharam Abadi

Means all lands that have been included as Agraharam/Abadi by the Government/ Collector within the site of village and includes existing villages hamlets.

(188) Wardrobe doors

Doors that provide access to built-in storage areas, excluding those fitted to pieces of furniture that are not built in to the building.

(189) Water Course , Minor

Minor Water Course means a water course which is not a major one.

(190) Water Course, Major

Major Water Course means a water course which carries storm water discharging from a contributing area of not less than 160 Ha.

Note: The decision of the authority as regards the calculation of the contributing area shall be final.

(191) Water Course / Nala

Watercourse means a natural channel or an artificial one formed by draining or diversion of a natural channel meant for carrying storm and wastewater.

(192) Water-Closet (WC)

Water flushed plumbing fixture designed to receive human excrement directly from the user of the fixture. The term is used sometimes to designate the room or compartment in which the fixture is placed.

(193) Wheel chair: Chair used by differently-abled people for mobility,

Size of small wheel chair: 750 x 1050 mm

Size of large wheel chair: 800 x 1500 mm

(194) Window

An opening to the outside other than a door, which provides all or part of the required natural light or ventilation or both to an interior space and not used as a means of egress/ingress.

(195) Window Sill

Solid wall (Brick or concrete wall) starting from the finished floor level to the base of first window or structural member consisting of a continuous horizontal metal/wooden forming the lowest member of a framework or supporting structure.

(196) Zonal Development Plan

A plan detailing out the proposals of Master Plan/General Town Planning [G.T.P.] Scheme.

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CHAPTER – III

STREAMLINING OF BUILDING PLAN APPROVALS
(Procedural Requirements for obtaining Building Permission)

3. PROCEDURAL REQUIREMENTS

(1) Development and Construction

Except as hereinafter otherwise provided these Rules shall apply to all development, re-development, erection and/or re-erection of a building as well as to the design, construction of, or reconstruction and additions and alterations to a building.

(2) Part construction

Where the whole or part of a building is demolished or altered or reconstructed, except where otherwise specifically stipulated, these Rules shall apply only to the extent of the work involved.

(3) Reconstruction

The reconstruction in whole or part of a building which has ceased to exist due to an accidental fire, natural collapse or demolition having been declared unsafe, or which is likely to be demolished by or under an orders of the concerned Authority as the case may be and for which the necessary certificate has been given by the Authority shall be allowed subject to these Rules.

(4) Change of Use / Occupancy

Where, use of a building is changed, except where otherwise specifically stipulated, these Rules shall apply to all parts of the building affected by the change.

(5) Existing Approved Building

Nothing in these Rules shall require the removal, alteration or abandonment, nor prevent continuance of the lawfully established use or occupancy of an existing approved building unless, in the opinion of the Authority such a building is unsafe or constitutes a hazard to the safety of adjacent or to the occupants of the building itself.

(6) Pre-Code Building Permission

Where any building permission which has been issued by the Authority before the commencement of these Rules and where construction is in progress and has not been completed within the specified period from the date of such permit, the said permission shall be deemed to be sanctioned under these Rules and shall only be eligible for revalidation there under. Accordingly, where the validity of sanction has expired and construction has not been commenced within the stipulated time limit, construction shall be governed by the provisions of these Rules. However competent authorities can decide the application of rules basing on the stage of construction and feasibility.

(7) Demolition of Existing Building

(a) Before a building is demolished, the owner shall obtain the permission from the concerned authority for demolition duly notifying all utilities departments having service connections within the building, such as water, electricity, gas, sewer and other connections. A permit to demolish a building shall be issued only after a release is obtained from the utilities departments stating that their respective service connections and

appurtenant equipment have been removed or sealed and plugged in a safe manner.

(b) The owner shall take all precautionary measures to avoid noise and dust pollution and shall not create any inconvenience to the neighboring plot owners.

(c) In case of semidetached building, no objection certificate from the neighbors shall be obtained.

(8) Interpretation

In these Rules, the use of present tense includes the future tense, the masculine gender includes the feminine and the neutral, the singular number, includes the plural and the plural includes the singular. The word person includes a Corporation as an individual, writing includes printing and typing and signature includes thumb impression made by a person who cannot write, if his name is written near to such thumb impression.

(9) Development

(a) Development Permission

No person shall carry out any development or redevelopment including sub-division of any plot or land (not forming part of any approved layout plan or scheme) or cause to be done without obtaining approval from the Competent Authority for the Building/ Layout Plan.

(b) Building Permission

No person shall erect, re-erect or make additions alterations in any building or cause the same to be done without, first obtaining a separate building permission for each such building from the Competent Authority.

(10) Procedure for obtaining Building Permission

(a) Application for Building Permission

(i) Every person who intends to erect, re-erect or make alteration in any place in a building or demolish any building shall submit an **Application for Building Permission** in **writing and/or through On-line** as prescribed to the concerned Authority of his intention in the prescribed Form.

(ii) Application for alteration

When the application is only for an alteration of the building only such plans and statements as may be necessary shall accompany the Application for Building Permission.

(iii) Building Permission not required

No Application and building permission is necessary for the following alterations, which do not otherwise violate any provisions regarding general building requirements, structural stability and fire safety requirements of these Rules.

(1) Plastering and patch repairs.
(2) Flooring and re-flooring.
(3) Construction or re-construction of sunshade not more than 75cms, in width within one's land and not overhanging over a public street.
(4) Construction or re-construction of parapet not more than 1.5m. in height as permissible under these Rules.

(5) White-washing, painting etc., including erection of false ceiling in any floor at the permissible clear height provided the false ceiling in no way can be put to use as a loft etc.
(6) Erection or re-erection of internal partitions provided the same are within the purview of the Rules.
(7) Opening and Closing of windows, ventilators and doors not opening towards other's properties and or public road/property.
(8) Replacing fallen bricks, stones, pillars, beams etc.
(9) Reconstruction of portions of buildings damaged by storm, rains, fire, earthquake or any other natural calamity to the same extent and specifications as existed prior to the damage provided the use conforms to the provisions of the Master Plan/any other sanctioned plan.

(b) Copies of Plans and Statements

(i) The Application for Building Permission shall be accompanied with as many numbers of copies of plans and statements as may be prescribed. If required, one of the plans shall be cloth mounted. The drawings/prints of the plans shall be on one side of the paper only.
(ii) One set of plans shall be released to the applicant or communicated On-line as prescribed after issue of permit or refusal as the case may be.

(c) Information accompanying the Application

The **Application for Building Permission** shall be accompanied by the location plan, site plan, sub-division / layout plan, building plan, services plan, specifications and certificate of supervision, copies of ownership title and other documents as prescribed.

(d) Documents

The notice shall be accompanied by the following documents:

(i) Self-Attested copies of Ownership Documents-lease-deed/sale-deed etc. giving the physical description of the plot/property.
(ii) In case of any deviation from the terms and conditions stipulated in the lease deed/ownership document, necessary clearance from the Authority.
(iii) Land Use Certificate (as per Perspective/Master/Zonal Plan or any other statutory plan) issued by the concerned Authority.
(iv) Previous Sanctioned Plan copy with details of approval for the existing building if any.
(v) An attested copy of Property Tax receipt/Vacant Land Tax receipt/NOC from the Assessment Department of the concerned local authority.
(vi) If the site/plot falls in approved layout, the copy of the approved layout plan duly marking the site/plot.
(vii) A declaration cum undertaking and indemnity bond by the Owner/Builder/Developer/LTP in the prescribed Form (Annexure-3).
(viii) An affidavit/undertaking for handing over road widening portion, if any, shall be submitted in the prescribed Form.(Annexure-4)
(ix) An affidavit/undertaking on Urban Land Ceiling, wherever applicable in prescribed Form.

(x) NOC from the Competent Revenue Authority in case the land is declared as surplus.

(xi) NOC from the District Collector wherever it is a Government Land allotted.

(xii) NOC from the Revenue Department under the Andhra Pradesh Agricultural Land (Conversion for Non-Agricultural Purpose) Act, 2006 for the sites falling outside the Built up area and outside the Approved Layouts.

(xiii) NOC from Revenue Department in case of lands abut Water Bodies, Water Courses & Nalas with sketch plan with measurements. (Wherever required).

(xiv) NOC from Irrigation Department in case of lands abut Water Bodies, Water Courses & Nalas with sketch plan with measurements. (Wherever required).

(xv) NOC from Railways (Wherever required).

(xvi) NOC from State Environmental Impact Assessment Authority (wherever required).

(xvii) NOC from Defence Authority (wherever required).

(xviii) NOC from Oil/Gas Authority (wherever required).

(xix) No Objection Certificate from the Airport Authority of India (wherever required).

(xx) Prior clearance obtained from Andhra Pradesh State Disaster Response & Fire Services Department from fire safety point of view as per the provisions of the Andhra Pradesh Fire Service Act, 1999 for Residential buildings of height more than 18m, Commercial buildings of height 15m and above and buildings of public congregation like Educational Buildings, Cinema Theatres, Function Halls and other Assembly Buildings on plot area of 500sq.m and above or of height above 6m has to be submitted.

(xxi) Approval from Chief Controller of Explosives and Director General, Fire Service, in case of hazardous buildings.

(xxii) Any other information/document, which the Authority may require in case of listed buildings or otherwise.

(xxiii) For Buildings of above 10m height the following details shall be submitted:

(1) Soil Test Report/Geo-technical Investigation Report issued after personal inspection by Institution/Consultant empaneled with/licensed by the local authority.

(2) Structural designs and drawings prepared duly taking the soil bearing capacity into consideration and certified by qualified Structural Engineer/Consultant Firm empaneled with/licensed by the local authority. [The Structural Engineer/Consultant Firm is held responsible for defect in the design].

(3) Building Plan and Application shall be invariably signed by the owner of the property, builder if any, the Architect and the Structural Engineer who designed the structure.

(4) If the construction is being taken up by a builder, an attested copy of the registered agreement entered between the owner of the property and the builder shall be submitted. In case of any changes in the agreement at a later date, a copy of the same shall also be submitted to the local authority.

(5) An undertaking on a Stamp Paper of Rs.100/-duly signed by the owner and builder specifying that no flat or built-up area shall be given possession to the purchaser/tenant unless they obtain the occupancy certificate from the local authority and provide all regular service connections.

(6) Contractor/Builders/Developer/Owner shall submit All Risks Insurance Policy for the construction period.

(11) Size of Drawing Sheets

The size of drawing sheets shall be any of those specified in the Table given below.

TABLE – 1

Size of drawing sheets

S. No.	Designation	Trimmed Size (mm)
(A)	(B)	(C)
1	A_0	841x1189
2	A_1	594x841
3	A_2	420x594
4	A_3	297x420
5	A_4	210x297
6	A_5	148x210

(12) Notation for Colouring of Plans

The plans shall be coloured as specified in the following table.

TABLE – 2

Notation for colouring of plans

Sl. No.	Type	Colour
(A)	(B)	(C)
1	Plot / Site lines	Thick green
2	Existing street / road	Green
3	Proposed work including services	Red
4	Existing construction proposed to be demolished	Yellow hatched
5	Existing structure to be retained	Black
6	Work in progress duly sanctioned	Green
7	Open Space	No colour

8	Drainage and Sewerage work	Red dotted
9	Water Supply work	Black dotted thin
10	Deviations	Red hatched
11	Recreation ground	Green

(13) Dimensions

(a) All dimensions shall be indicated in metric units.

(b) For the purpose of these Rules, the following conversion from M.K.S. and F.P.S. system shall be reckoned for the road widths only.

TABLE – 3

Conversion scale

S. No.	**Dimension**	
	in Meters	**in Feet**
(A)	**(B)**	**(C)**
1	3	10
2	6	20
3	7.5	25
4	9	30
5	12	40
6	15	50
7	18	60
8	24	80
9	30	100
10	45	150
11	60	200

(14) Details of Plans to be submitted

(a) Location plan / Key plan:

It shall be drawn to a scale of not less than 1:10,000 showing boundary, location of the site with respect of neighborhood land marks.

(b) Layout/Sub-division Plan:

(i) In the case of development work proposed for Layout/Sub-division approval, the **Application for Layout/Sub-division Plan** shall be accompanied by the layout/sub-division plan which shall be drawn on a scale of not less than 1:500 containing the following:

(ii) Scale used and North Point

(iii) The location of all existing and proposed roads with their existing and proposed prescribed widths within the land.

(iv) Dimensions of plots along with building lines showing the required setbacks as per Rules with dimensions within each plot.

(v) The location of drains, sewers, public facilities and services and electrical lines etc.

(vi) Table indicating size, area and use of all the plots in the sub-division / layout plan.

(vii) A statement indicating the total area of the site, area utilised under roads, open spaces for parks, playgrounds, recreation places and development plan reservations, schools, shopping and other public places along with their percentage with reference to the total area of the site proposed to be sub divided.

(viii) In case of plots which are sub-divided in built-up areas in addition to the above, the means of access to the sub-division from existing streets.

(c) Site Plan

(i) The **site plan** shall be drawn to a scale of

(1) 1:100 for plots up to 500sq.m. in size;

(2) 1:500 for plots above 500sq.m. and up to 1000sq.m;

(3) 1:1000 for plots above 1000sq.m in size.

(ii) The **site plan** shall show the following:

(1) The direction of north point relative to the plan of the buildings and scale used.

(2) The boundaries of the site and of any contiguous land belonging to the owner thereof.

(3) The position of the site in relation to neighboring street.

(4) The names and widths of the streets in which the building is proposed to be situated.

(5) All existing physical structures / features such as major trees, wells, drains, boulders, overhead electric supply lines, drainage and water lines standing on, over or under the site.

(6) The position of the building and of all other buildings, if any, which the applicant intends to erect upon his contiguous land referred to in (ii) (2) in relation to

(a) The boundaries of the site and in case where the site has been partitioned, the boundaries of the portion owned by the applicant and also of the portions owned by others.

(b) All adjacent streets, building (with number of storeys and height) and premises and drainage and water lines within a distance of 12m of the site and of the contiguous land, if any, referred to in (ii) (2); and

(c) If there is no street within a distance of 12m of the site, the nearest existing street.

(d) Building number or plot number of the property on which the building is intended to be erected is to be indicated on the drawing.

(7) The means of access from the street to the building, and to all other buildings, if any which the applicant intends to erect upon his contiguous land, referred to in (ii) (2).

(8) Space to be left around the building to secure a free circulation of air, admission of light and access.

(9) The ground area of the whole property and the breakup of covered area and common area on each floor with the calculation for

percentage covered in each floor in terms of the total area of the plot as required under the Rules governing the coverage of the area.

(10) Parking plans indicating the parking spaces and drive ways.

(11) Such other particulars as may be prescribed by the concerned Authority.

(d)Building Plan

(i) The plans of the building, elevations and sections shall be drawn to a readable scale of (or preferably with dimensions)

(1) 1:50 for plots measuring up to 250sq.m.

(2) 1:100 for plots measuring above 250sq.m.

(3) 1:200 for plots measuring 2000sq.m and above with details on a scale of 1:100.

(ii) The **Building Plan** shall show the following:

(1) The north point relative to the plan.

(2) Floor plans of all floors together with the covered area clearly indicating the size and spacing of all frame members and sizes of rooms and the position and width of staircases, ramps and other exit ways, lift ways, lift machine room and lift pit details.

(3) The use or occupancy of all parts of the building.

(4) Exact location of essential services, for example W.C., Sink, Bath etc.

(5) Vertical sectional drawing showing clearly the sizes of the footings, thickness of basement wall, wall construction, size and spacing of framing members, floor slabs and roof slabs with their materials.

(6) The section shall indicate the heights of the building and rooms and also the heights of the parapet, and the drainage and the slope of the roof.

(7) At least one section shall be taken through the staircase, kitchen and toilet, bath and W.C.

(8) Parking spaces and drive ways.

(9) All doors, windows and other openings including ventilators with sizes in proper schedule form.

(10) In case of AC buildings, details of building service-air conditioning system with position of dampers, mechanical ventilation system, electrical services, boilers, gas pipes etc.

(11) Terrace plan indicating the drainage and the slope of the roof.

(12) All building elevations.

(13) The location of Rain Water Harvesting Pits with specifications and cross section.

(14) Façade with height of buildings, permissible projections beyond the permissible building line, location of doors, windows and other openings including ventilators with size in a schedule form. Name of external finishes material to be used has to be shown on elevation.

(15) Such other particulars as may be required to explain the proposal clearly and as prescribed by the concerned Authority.

(e) Building plans for all Hi-rise and Special Buildings

For all hi-rise buildings of residential, commercial and business buildings and special buildings like assembly, institutional, industrial storage and hazardous occupancies, the following information [in addition to (d) (ii) above] shall be furnished / indicated in the building plans.

(i) Access to fire appliances/vehicles with details of vehicular turning circle/and clear motorable access way around the building;
(ii) Size (width) of main and alternate staircase along with balcony approach, corridor ventilated lobby approach;
(iii) Location and details of lift enclosures;
(iv) Location and size of fire lift;
(v) Smoke stop lobby/door where provided;
(vi) Refuse chutes; refuse chamber, services duct, etc. ;
(vii) Vehicular parking spaces;
(viii) Refuge area if any;
(ix) Details of building service-air conditioning system with position of dampers, mechanical ventilation system, electrical services, boilers, gas pipes etc.,
(x) Details of exits including provision of ramps, etc., for hospitals and special risks
(xi) Location of generator, transformer and switchgear room;
(xii) Smoke exhauster system if any;
(xiii) Details of fire alarm system network;
(xiv) Location of centralized control connecting all fire alarm system, built in fire protection arrangement & public address system etc.
(xv) Location and dimension of static water storage tank and pump room;
(xvi) Location and details of fixed fire protection installations such as sprinklers, wet risers, hose reels, drenchers, CO_2 installation etc.;
(xvii) Location and details of first aid firefighting equipment/installation;
(xviii) The proper signs/symbols and abbreviation of all firefighting systems shall be shown in diligent as per the relevant I.S. Code.

(f) Landscape Plan

Landscape plan shall indicate the circulation and parking spaces, pathways (hard surface), greenery and plantation (soft area) etc. and shall be drawn in the scale of

(i) 1:100 for plots up to 500sq.m in size
(ii) 1:500 for plots above 500sq.m.

(g) Urban Design and Architectural Control

For certain areas as well as sites abutting major roads of 30m and above, the Competent Authority may enforce urban design and architectural control. These shall be detailed out keeping in view the development requirements given in these Rules and the National Building Code norms. For this purpose, urban design and architectural control sheets / Plans approved by the Competent Authority shall be complied with.

(h) Service Plan and Water Supply Provisions

(i) Plans, elevations and sections of private water supply, sewage disposal system and details of building services, where required by the concerned Authority, shall be made available on the scale not less than 1:100.

(ii) For recharging ground water, rain water-harvesting provisions are to be provided within the plot, which are to be indicated on the building plans.

(iii) For residential plots more than 2000sq.m and non-residential plots more than 1 hectare in size, separate conveying system to be provided for sewerage and sullage to facilitate reuse of sullage water for gardening and washing purposes. This may require suitable storage facilities that are to be indicated on the building plans.

(15) Signing the Plans and Application [Notice]

All the Plans and Application for Building Permission shall be duly signed by the owner and developer if any; and the Licensed/Registered Technical Personnel i.e., Architect/Engineer/Surveyor/Town Planner as the case may be and in case of Buildings above 10m height the Structural Engineer shall also sign all the plans and Application for Building Permission. They shall give their present and permanent addresses and license/Registration details.

(16) Supervision and Execution of Drainage / Sanitary works

A certificate of Supervision and Execution of drainage / sanitary works shall be enclosed in the prescribed Form by the Architect / Engineer / Supervisor as the case may be.

(17) Building Permit Fees and other Charges

(a) No building application shall be deemed valid unless and until the owner submitting the application has paid the Building Permit Fees and other charges as notified by the concerned Authority from time to time as per the procedure prescribed.

(b) The initial fee of the Building Permit Fee of the proposed building to be paid along with the Application for Building Permission is as follows:

Plot area (sq. m)	Initial fee to be paid (Rs.)
Up to 200	3000
Above 200	10000

(c) The balance Building Permit/License Fees together with other fees and Charges shall be paid before the issue of permission / sanction on intimation.

(d) In case of rejection of building application, the above initial fees paid would be forfeited.

(e) No fees and charges would be levied for parking spaces provided in any floor.

(18) Levy of Special Fees and Other Provisions for Certain Areas

The Sanctioning Authority with the specific approval of the Government may, when implementing certain Projects, levy Special fees and other fees/charges for lands/sites/premises abutting or in the vicinity of the Ring Road or other highways/major roads or the Mass Rail Transit System/Light Rail Transit System/Multi Modal Transit System/Bus Rapid Transit System route indicated in the Master Plan or as proposed, at the rates and procedure prescribed by the Government. The procedure for collection of this fee shall be as prescribed.

(19) City Level Infrastructure Impact Fees Applicable in Certain Cases:

(1) With a view to ensure development of city level infrastructure facilities, the City Level Infrastructure Impact Fees shall be levied in case of large projects/buildings as given in the table below:

TABLE – 4

City Level Infrastructure Impact Fees

S. No.	Areas	Use of the building, No. of floors, and rate in Rs. Per sq. m of built up area					
		Residential use			Other than Residential & Industrial uses		
		From 6th floor To 9th floor	From 10th floor To 17th floor	Above 17th floor	From 6th floor To 9th floor	From 10th floor To 17th floor	Above 17th floor
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
1	GVMC VMC GMC	500	1000	2000	1000	2000	3000
2	Other Municipal Corporations	500	1000	2000	800	1500	2000
3	Selection Grade Municipalities Special Grade Municipalities	250	400	800	500	1000	1500
4	Other Municipalities Gram Panchayats falling in Development Authorities Gram Panchayats falling in Master Plan areas notified under APTP Act, 1920	200	300	500	300	500	1000

(2) For the first five floors of the building (excluding stilt floor) there will be no levy of City Level Infrastructure Impact Fee.

(3) In case of Multiplex Complex, the rates given in the Multiplex Complex Rules shall be applicable.

(4) The Government may revise the above rates from time to time.

(5) The above rates shall not be applicable for Government Departments and Public Agencies like Development Authority, Andhra Pradesh Industrial

Infrastructure Corporation (APIIC) and Local bodies. This exemption shall not be applicable for commercial projects taken up by such agencies.

(6) The amount levied and collected under the above Rule shall be credited and maintained in a separate escrow account by the concerned sanctioning authority and 50% of it shall be utilised for development of infrastructure in the same area and balance amount is to be utilised towards improvement of city level capital infrastructure in the area. An Infrastructure Plan and Action Plan for implementation is required to be undertaken by the Competent Authority and the said Fund is utilised accordingly.

(20) Compliance by Owner/Builder/Developer/Licensed Technical Personnel for ensuring construction is undertaken as per sanctioned plan

(a) The owner and builder/developer shall give an Affidavit (Annexure 3) in the prescribed Form duly notarized to the effect that in the case of any violation from the sanctioned building plan, the Enforcement Authority can summarily demolish the violated portion.

(b) In respect of Apartment Buildings, the owner or builder shall give a Declaration in the prescribed Form (Annexure 3) duly specifying the in case of any violation with regard to the Declaration, the Enforcement Authority can demolish the violations.

(c) Before release of the building sanction by the sanctioning authority, the owner of the plot/site is not only required to produce the original Sale Deed, registered under the provisions of the Indian Registration Act, 1908/Certified copy issued by Stamps and Registration Department for the perusal of the sanctioning authority and cross verification with the self-attested copy submitted with the building application.

(d) The owner is required to hand over 10 % built-up area in any approved floor shall be mortgaged, as the case may be, to the sanctioning authority by way of a Notarized Affidavit/Registered Mortgage Deed. In respect of row houses/detached houses/cluster housing 5% of the units shall be handed over by way of Notarized Affidavit/Registered Mortgage Deed to the sanctioning authority. The Notarized Affidavit/Registered Mortgage Deed shall be got entered by the sanctioning authority in the Prohibitory Property Watch Register of the Registration Department. Then only the Building sanction will be released.

(e) Individual Residential Buildings in plots up to 200sq.m with height up to 10m in respect of all Municipal Corporations; and in plots up to 300sq.m with height up to 10m in respect of Gram Panchayats in CRDA, MRDA and UDA areas and in all Municipalities/Nagar Panchayats are exempted from the condition (d) above.

(21) Grant of Permission or Refusal

(a) The concerned Authority, on the advice of the Town Planner, may sanction the plans, specifications with such modification or directions as it may deem necessary and there upon shall communicate its decision to the applicant giving the notice in the **Building Permission Order** in the prescribed form after receiving the balance fee and charges and obtaining the relevant undertakings if any.

(b) In case of refusal, the Authority duly mentioning the reasons for refusal shall communicate its decision to the applicant giving the notice in the **Building Refusal Order** in the prescribed form.

(c) The building permit for Hi-rise Buildings/Special Buildings shall be given by the Authority only after the prior clearance from the Andhra Pradesh State Disaster Response & Fire Services Department and Airport Authority of India are obtained.

(d) In case, where the building permission requires the clearance of Heritage Committee, if constituted for the purpose, then the Authority shall issue the building permission only after getting the clearance from the Heritage Committee.

(e) If within **30 days** of the receipt of application for sanction of building permission or the time limit as stipulated in the Act, the Authority fails to intimate in writing to the applicant who has submitted the application, of its refusal or sanction to the application with its plans and statements, the same shall be deemed to have been sanctioned provided the fact is immediately brought to the notice of the Authority in writing by the applicant who has submitted the application and having not received any intimation from the Authority within 15 days of giving such application subject to the conditions mentioned in the Rules, nothing shall be construed to authorize any person to do anything in contravention or against any regulations, Bye-Laws or ordinance operating at the time of execution of the work at site.

(f) Once the plan has been scrutinized and objections have been pointed out, the owner who has submitted the application for building permit shall modify the plan to comply with the objections raised and resubmit the modified plans. The Authority shall scrutinize the resubmitted plans and thereafter the plans shall be sanctioned if they are in accordance with these rules. It is clarified further as below that:

   (i) No Application for building permission shall be valid unless the information required by the Authority under the Rules or any further information which may be required has been furnished to the satisfaction of the Authority and required fees have been paid.

   (ii) The Owner /Licensed or Registered Technical Personnel and others shall be fully responsible for any violation of Master Plan/Zonal Plan/Building Rules, Architectural control, lease deed conditions etc. In case of any default they shall be liable for action. Any construction so raised shall be deemed to be unauthorized.

(22) Sanction of Building Permit Applications through Online Building Permission Management System:

(a) **'Online Building Permission Management System'** means implementation of Information and Communication Technology (ICT) enabled Integrated Online Building Permission Management System where permission for any category of buildings will be issued.

(b) The sanction of Building Permission for all categories of the buildings including High rise Buildings which are permissible in normal course as per zoning regulations and as per these Rules and received with all prescribed documents and plans shall be done through the Online Building Permission

Management System by the respective Sanctioning Authority except in case of Gram Panchayats falling in the following areas.

(i) Andhra Pradesh Capital Region Development Authority [APCRDA]; Metropolitan Region Development Authority (MRDA)/Urban Development Authority (UDA); and

(ii) Master Plans / General Town Planning Schemes notified under Andhra Pradesh Town Planning Act, 1920 not falling in Andhra Pradesh Capital Region Development Authority [APCRDA] / Metropolitan Region Development Authority (MRDA) / Urban Development Authority (UDA).

(c) Post Verification of Building Permissions:

After sanction of the Building Permissions through the Online Building Permission Management System, the respective Local Authorities, Competent Authority and Sanctioning Authority who shall examine and scrutinize the Building Permissions as per the categories given below in detail and verify the compliance of the provisions of the land uses as per the Master Plans/General Town Planning Schemes, layouts, the relevant rules and regulations as applicable and wherever there has been any false statement, misrepresentation of material facts in the application on which the building permission was sanctioned is invalid and shall be deemed to be cancelled. The concerned authority shall be entitled to take appropriate action against such Licensed Technical Personnel any person whoever is responsible and also against such construction. Till such time any application filed by concerned LTP/Applicant shall not be accepted without specific approval from Competent Authority.

(i) Local Authorities shall undertake post verification of all building permissions issued in their respective jurisdiction.

(ii) Andhra Pradesh Capital Region Development Authority [APCRDA]/Metropolitan Region Development Authority (MRDA)/Urban Development Authority (UDA)/IALA Areas:

In case of areas falling under the jurisdiction of APCRDA/MRDA/UDA/IALA, post verification of building permissions shall be done as per the delegation of powers and as per the categories permissible in normal course as per zoning regulations issued by the concerned APCRDA/MRDA/UDA/IALA from time to time.

(iii) Areas not covered under APCRDA/MRDA/UDA/IALA Areas:

(1) The concerned Regional Deputy Director of Town & Country Planning shall undertake post verification of building permissions which are having site area of above 300sq.m and up to 1000sq.m where the proposed activity is permissible in normal course as per Master Plan and Zoning Regulations.

(2) The Director of Town & Country Planning or his representative shall undertake post verification of building permissions which area having the site area above 1000sq.m where the proposed activity is permissible in normal course as per Master Plan and Zoning Regulations.

(23) Sanction of Building Permit Applications in case of Gram Panchayats Falling in APCRDA/MRDA/UDA and Master Plans/General Town Planning Schemes Notified Under Andhra Pradesh Town Planning Act, 1920:

(a) Gram Panchayats falling in Andhra Pradesh Capital Region Development Authority (APCRDA)/Metropolitan Region Development Authority (MRDA)/Urban Development Authority (UDA):

In case of Gram panchayats areas falling under the jurisdiction of APCRDA/MRD/UDA, the sanction of building permissions shall be done as per the delegation of powers and as per the categories permissible in normal course as per zoning regulations issued by the concerned APCRDA/MRDA/UDA from time to time.

(b) Gram Panchayats covered in Master Plans / General Town Planning Schemes notified under Andhra Pradesh Town Planning Act, 1920 not falling in APCRDA/MRDA / UDA:

In the Gram Panchayat areas covered under sanctioned Master Plans/General Town Planning (GTP) Schemes not falling in APCRDA/MRDA/UDA, the Sanctioning Authority is empowered to sanction the individual residential building permission up to 10m height in plot area up to 300sq.m, in the sites where the proposed activity are permissible in normal course as per Zoning Regulations. In respect of other cases prior Technical Approval shall be obtained from the Competent Authority i.e. Director of Town & Country Planning. The Panchayat Secretary shall submit the proposal through the concerned Regional Deputy Director of Town Planning (RDDTP) to the Director of Town & Country Planning.

(24) Duration of Sanction

(a) The construction shall be commenced within 18 months from the date of sanction.

(b) The sanction accorded is valid for 6 years in case of High Rise Buildings, Multiplex and Group Development Schemes and 3 years in case of Non High Rise Buildings from the date of sanction.

(c) The permit shall be got revalidated before the expiry of this period. The revalidation shall be considered in case of projects commence within stipulated period. Where construction has not commenced the revalidation shall be subject to rules in force.

(d) The Building Permit Fee shall be paid for revalidation of the permit.

(e) No building activity can be carried out after the expiry of validity of such building permit.

(f) No completion/occupancy shall be entertained after the expiry of valid extension of time for construction.

(25) Revalidation

(a) If the owner fails to complete the building within the validity period and the building is partly constructed, and the completed building is in conformity with the building Rules, then the permission shall be revalidated for further period of one year in case of Non High Rise Buildings and two years in case of High Rise Buildings and Group Development Schemes, as a onetime measure duly collecting the necessary fee and charges as prescribed and

the owner be informed accordingly in the prescribed Building Permission Revalidation Order.

(b) Application for such revalidation shall be submitted along with the following documents:
  (i) Original sanctioned plan;
  (ii) Revalidation fee as prescribed;
  (iii) NOC required from lessor in case the property is lease hold, for time extension for construction.
  (iv) Documents in support of construction, if any, having been done within valid period of sanction;
  (v) Certificate of supervision from the Licensed Technical Personnel that the construction is being carried out under his supervision according to the plans sanctioned by the concerned Local Body/Authority.
  (vi) Ownership documents or Affidavit for updated ownership document after previous sanction.

(c) The application for revalidation shall be processed and revalidation or objection, if any, shall be communicated to the applicant as prescribed for the Building Permission.

(26) Revocation of Permission

The concerned Authority may revoke any building permission issued under the provisions of the Rules duly giving an opportunity to the applicant to represent if any, wherever there has been any false statement, misrepresentation of material facts in the application on which the building permission was based and shall be communicated to the applicant in the prescribed form for Revocation of Permission.

(27) Maintenance of a Building Application Register

Building Application Register in the prescribed Form containing the necessary particulars including information as to the manner in which Building Applications for permission have been dealt with by the Local Authority shall be maintained.

(28) Penal Action against Licensed Technical Personnel

(a) The Local Authority reserves the right to take action and to debar/black list the Licensed Technical Personnel i.e., Architect, Engineer, Plumber, Structural Engineer, Supervisor and Town Planner, if found to have deviated from the professional conduct or to have made any misstatement or on account of misrepresentation of any material fact or default either in authentication of a plan or in supervision of the construction against the building Rules/Bye-Laws and the sanctioned building plans.

(b) If the Local Authority finds at any time any violation of the building Rules or misrepresentation of fact, or construction at variance with the sanction or building Rules, inclusive of the prescribed documents, the Local Authority shall be entitled to revoke the sanction and take appropriate action against such Licensed Technical Person and such Licensed Technical Person shall not be authorized to submit building plans, fresh plans till finalization of the case.

(c) Before debarring or blacklisting such Licensed Technical Person if found to be indulging in professional misconduct or where he/she has

misrepresented any material fact the Local Authority shall give him a show-cause notice with a personal hearing.

(29) Procedure during construction work

(a) Construction to be in conformity with Rules

Neither the granting of the permission nor the approval of the drawings and specification, nor inspection by the Authority during erection of the building shall in any way relieve the Owner of the building/Licensed Technical Personnel from their responsibility for carrying out work in accordance with these Rules.

(b) Notice for commencement of work

Before commencement of the building work for which building permit has been sanctioned, the owner shall within the validity period of sanction give **Notice of Commencement** in the prescribed Form to the Local Authority of his intention to start the construction.

In case the owner commences the construction without giving commencement notice, he may be penalized by imposing penalty as prescribed.

(30) Documents to be kept at site

The following documents shall be kept at the Site during construction.

(a) A copy of sanctioned plan exhibited in a conspicuous place on the property in respect of which the permission was issued.

(b) A copy of the approved drawings and specifications of the building in respect of which the permission was issued.

(c) A set of records of test data where tests of any materials are made to ensure conformity with the requirements, shall be kept available for inspection during the construction of the building and for such a period thereafter as required by the Authority.

(31) Checking of Building during Construction and Enforcement

In addition to the enforcement powers and responsibilities given in the respective laws of the local authority, in respect of these Rules:

(a) It shall be the responsibility of the Owner/Licensed Technical Personnel to ensure that the construction of the building is in accordance with the sanctioned building plan.

(b) The Enforcement Authority concerned shall be wholly and severally responsible for ensuring and maintaining the right of way/width of the road and building restrictions as given in these Rules.

(c) The Enforcement Authority shall summarily remove any violation or deviation in building construction in maintaining the road widths and building line.

(d) In respect of apartment complexes, shopping complexes and all high rise buildings, periodical inspections shall be carried out indicating the stage of work with reference to sanctioned plan. In case of any deviations from the sanctioned plan, necessary action shall be taken as per rules.

(e) Any person who whether at his own instance or at the instance of any other person or anybody including the Government Department undertakes or carries out construction or development of any and in contravention of the statutory master plan or without permission, approval or sanction or in contravention of any condition subject to which such permission or approval or sanction has been granted shall be punished with imprisonment for a term which may extend to three years, or with fine which may extend to ten percent of the value of land or building including land in question as fixed by the Registration Department at the time of using the land or building. Provided that the fine imposed shall, in no case be less than fifty percent of the said amount.

(32) Notice of Completion

(a) Every owner/developer shall submit a **Notice of Completion** in the prescribed Form to the Authority regarding completion of the work of the building on or before the last date as stipulated in the building permission.

(b) The notice of completion shall be submitted by the owner/licensed builder/developer duly signed by the Licensed Technical Personnel, who has supervised the construction, accompanied by two sets of completion plans (as in the case of sanctioned plan including one cloth mounted copy) and the following documents along with the prescribed fee if any:

(i) Final Clearance of the Director General, A.P. Disasters Response and Fire Services Department, wherever required.

(ii) Structural Stability Certificate duly signed by the Structural Engineer in case of Buildings above 10m height.

(iii) Certificate of fitness of the Lift from concerned Agency which has erected /Department wherever required.

(iv) Two sets of photographs of the building from all sides duly signed by Owner, Developer and Licensed Technical Personnel.

(v) A certificate by the Owner, Developer and Licensed Technical Personnel for covering up the underground drain, sanitary and water supply work, under their supervision and in accordance with Building Rules and sanctioned building plans as applicable.

(vi) A certificate by the Owner, Developer and Licensed Technical Personnel with regard to the construction of Rain Water Harvesting Structures, Solar Energy Structures and Recycle of Water Treatment Plants wherever required as per the sanctioned plans.

(vii) Clearance from Chief Controller of Explosives, wherever required.

(viii) Any other information/document that the Authority may deem fit.

(33) Occupancy Certificate

(a) Occupancy Certificate shall be mandatory for all buildings. No person shall occupy or allow any other person to occupy any building or part of a building for any purpose unless such building has been granted an Occupancy Certificate by the Sanctioning Authority.

(b) The Sanctioning Authority or the person authorized, on receipt of notice of completion shall undertake inspection to verify the following aspects:

(i) No. of Floors.
(ii) External setbacks.
(iii) Usage of the building.
(iv) Parking space provision.
(v) Abutting road width.
(vi) Rain Water Harvesting Structures, as applicable.
(vii) Solar Energy Structures in Buildings, as applicable.
(viii) Recycle of Water Treatment Plants, as applicable.

The T.P staff shall inspect the building and submit remarks within 10 days failing which the online system shall generate occupancy certificate automatically under deemed provision.

(c) In case, if the Occupancy Certificate is refused due to deviation, which cannot be compounded, the completion certificate will be rejected and communicated to the applicant in the prescribed form.

(d) The Sanctioning Authority shall communicate the approval of the **Occupancy Certificate** in the prescribed Form within 15 days or may issue the same after levying and collecting compounding fee, if any.

(e) If nothing is communicated within this period, it shall be deemed to have been approved by the Authority for occupation provided the fact is immediately brought to the notice of Authority in writing by the person, who had given the completion notice and has not received any intimation from the Authority within 15 days.

(f) If the authority fails to issue the occupancy certificate within the above stipulated period the responsibility shall be fixed with the concerned officer who fails to process the file.

(g) The Sanctioning Authority is empowered to compound the offence in relation to setbacks violations (other than the front setback) in respect of non-high rise buildings only up to 10%, duly recording thereon the violations in writing. The rate of Compounding fee shall be equivalent to one hundred percent of the value of the land as fixed by the Registration Department at the time of compounding for the violated portion and the Government may revise this rate from time to time. Compounding of such violation shall not be considered for buildings constructed without obtaining any sanctioned plan.

(h) For all high rise buildings, the work shall be subject to inspection by the Andhra Pradesh State Disasters Response & Fire Services Department and the Occupancy Certificate shall be issued only after clearance from the Andhra Pradesh State Disasters Response & Fire Services Department with regard to Fire Safety and Protection requirements.

(i) The sanctioning authority shall ensure that all public and semipublic buildings are constructed disable friendly and provide facilities for Differently abled persons, Elderly and Children as per the Rules there under and also as per the latest version of National Building Code of India while issuing occupancy certificate.

(j) The functional/line agencies dealing with electric power, water supply, drainage and sewerage shall not give regular connections to the building

unless such Occupancy Certificate is produced, or alternatively may charge 3 times the tariff till such time Occupancy Certificate is produced. This condition shall also be applicable to all unauthorized constructions and buildings constructed without sanctioned building plan. In addition to the above, the Local Body shall collect every year two times the property tax as penalty from the owner / occupier.

(k) The Registration Authority shall register only the permitted built up area as per the sanctioned building plan and only upon producing and filing a copy of such sanctioned building plan. On the Registration Document it should be clearly mentioned that the registration is in accordance with the sanctioned building plan in respect of setbacks and number of floors.

(l) The financial agencies / institutions shall extend loan facilities only to the permitted built up area as per the sanctioned building plan.

(34) Partial Occupancy/Completion Certificate

In such cases where a project is not complete at one stretch constructed in different stages, part occupancy/completion certificate for the building otherwise complete in all respects, may be issued subject to the condition that such a part occupancy/completion certificate would apply to an independent block/building of the sanctioned project. In case of a residential house part occupancy/completion may be issued for an independent floor.

(35) Connection to the Municipal Sewer / Water lines

(a) Temporary connection for water, electricity or sewer, permitted for the purpose of facilitating the construction, shall not be allowed to continue in the premises beyond the plan validity period and without obtaining completion / occupancy certificate.

(b) No connection to the Municipal water mains or to the Municipal sewer line with a building shall be made without the prior permission of the concerned Authority and without obtaining occupancy / completion certificate.

(c) In case the use is changed or unauthorized construction is made, the Authority is authorized to discontinue such services or cause discontinuance of such services.

(36) Limitations of Building Sanction

Sanction of building permission by the Sanctioning Authority shall not mean responsibility or clearance of the following aspects:

(a) Title or ownership of the site or building

(b) Easement Rights

(c) Variation in area from recorded area of a plot / site or building

(d) Structural Reports, Structural Drawings and structural stability

(e) Workmanship, soundness of structure and materials used

(f) Quality of building services and amenities in the construction of building

(g) The site/ area liable to flooding as a result of not taking proper drainage arrangement as per the natural lay of the land, etc. and

(h) Other requirements or licenses or clearances required for the site /premises or activity under various other laws.

(37) Licensing of Builders, Developers, Engineers, Landscape Architects, Real Estate Companies, Structural Engineers, Supervisors, Town Planners, Urban Designers & Other Technical Personnel

(a) The Licensing of Builders, Developers, Engineers, Landscape Architects, Real Estate Companies, Structural Engineers, Supervisors, Town Planners and Urban Designers & Other Technical Personnel mandatory shall be in accordance with the rules as prescribed.

(b) Architects shall be required to be registered with the Council of Architecture as required under the Architects Act, 1972.

(c) The engaging of the services of a licensed developer/builder shall be mandatory for Apartment Buildings, Group Housing, all types of Group Development Schemes, all High-Rise Buildings and all Commercial Complexes.

(d) Developments undertaken for construction of individual residential houses, educational/institutional/industrial buildings and developments undertaken by public agencies are exempted from the above condition.

(e) Any developer/builder undertaking development or any firm doing property business in any Local Authority/Urban Development Authority Area or soliciting property sale/transactions or advertising as such in case of above, shall necessarily mention the details of its licence number, licence number of the licensed developer to whom the approval is given by the said Local Authority/Urban Development Authority, together with the permit number and its validity for information and verification of public/prospective buyers.

(f) Absence of the above or suppressing of the above facts or in the case of other licenses and other technical personnel who violate the conditions would invite penal action including debarring of the real estate firm/development firm/company from practice in the local authority area for 5 years besides prosecution under the relevant laws/code of conduct by the Sanctioning Authority.

(g) Any licensed developer/builder/other technical personnel who undertake construction in violation of the sanctioned plans shall be black-listed and this would entail cancellation of their licence besides being prosecuted under the relevant laws/code of conduct.

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CHAPTER – IV

GENERAL SPACE REQUIREMENTS AND SERVICES

4. Standard space requirements of various parts of a building of all types including high rise buildings:

(1) Space requirement for different parts of building of different sizes:

(a) Plinth:

(i) *Main Building:* The plinth or any part of a building or outhouse shall be so located with respect to highest road level from site so that adequate drainage of the site is assured. The height of the plinth shall be not less than 450mm from surrounding ground level.

(ii) *Interior Courtyards, Covered Parking Spaces and Garages:* Every interior court yard shall be raised at least 150mm above the determining ground level and shall be satisfactorily drained either by gravity or by mechanical means.

(b) Minimum Size, Width and Height of different components of residential premises shall be as given in the Table below.

TABLE - 5
Minimum Size, Width and Height of different components of residential premises

S. No.	Components of Building	Minimum Requirement for a Dwelling Unit up to 50sq.m			Minimum Requirement for a Dwelling Unit above 50sq.m		
		Area (sq. m)	Width (m)	Height (m)	Area (sq. m)	Width (m)	Height (m)
(A)	**(B)**	**(C)**	**(D)**	**(E)**	**(F)**	**(G)**	**(H)**
1	Habitable Rooms	7.5	2.1	2.75	9.5	2.4	2.75
2	Kitchen	3.3	1.8	2.75	4.5	1.8	2.75
3	Pantry	-	-	-	3.0	1.4	2.75
4	Kitchen with Dining area	7.5	2.1	2.75	7.5	2.1	2.75
5	Bathroom	1.2	1.0	2.2	1.8	1.2	2.2
6	WC	1.0	0.9	2.2	1.2	0.9	2.2
7	Combined Bath & WC	1.8	1.0	2.2	2.8	1.2	2.2
8	Door ways (Habitable rooms)	-	0.9	2.1	-	0.9	2.1
	(Kitchen, Bath, WC)	-	0.75	2.0	-	0.75	2.0
9	Staircases	-	1.0	-	-	1.0	-
10	Garage	Two-wheeler garage: 1 x 2 m			18.0	3.0	2.4
11	Store room	Area and width of the store has no restriction, however Minimum Height has to be 2.20mt. If the area of the store is 9.5sqm and above, the light and ventilation clause shall also apply.					
12	Projections	Permitted within the plot boundary, up to 0.75 m width. No portions of any projection whatsoever shall project outside the plot boundary.					

Notes:

1. Provided that the minimum clear head way under any beam shall not be less than 2.4 m.
2. Maximum permissible height for building component mentioned above is 4.8m. However if the architect desires that more height of any building component is necessary for the functional design even to the extent of double height (to be counted twice in FAR) in the project, the same may be permitted subject to the overall permissible height of building/structure.
3. In case of group housing all open spaces provided either in interior or exterior shall be kept free from any erections thereon and shall open to the sky. Nothing except cornice, chhajja or weather shade (not more than 0.75m wide) shall overhang or project over the said open space so as to reduce the width to less than minimum required. Such projections shall not be allowed at height less than 2.2m from the corresponding finished floor level.
4. Architectural features and landscape:
   Architectural features like pergolas, free standing walls, trellis, on-permanent gazebos, fountains, statues, pedestal, louvers, fins, jalis, sunshade etc. in permissible building envelope area, which shall not be counted in FAR and Ground Coverage.

(2) Minimum Size and Width of different components of Non-residential premises

The minimum area for office room/shop or any other space to be used as workspace shall not be less than 6.0sq.m and with a minimum width of 2.1m.

5. Splay at road junctions, including 'Y' junctions:

Splay required at road junctions is given in the Table below. The area of splay would be deemed to form part of the road junction.

TABLE- 6

Splay required at road junctions

Sl. No.	Road Width (in m)	Splay / Offset (in m)
(A)	(B)	(C)
1	Less than 12	3 X 3
2	Above 12 up to 24	4.5 X 4.5
3	Above 24	6 X 6

6. Requirements of Parts of Buildings

(1) Balcony:

(a) No balcony or corridor shall be permitted projecting within the mandatory open spaces/setbacks in case of non-high rise buildings. These if provided

shall be set back as per the minimum mandatory open spaces and the setbacks shall be clear from the edge of the balcony or corridor.

(b) In case of high rise buildings, the balcony projection of up to 2m may be allowed projecting on to the open spaces for upper floors from 6m height from the corresponding finished floor level onwards.

(2) Basement:

The construction of the basement may be allowed in accordance with the land use and other provisions specified under the Master Plan/Zonal Plan/Zoning Regulations/Building Rules. The basement shall have the following requirement:

(a) Basements are allowed for plots 750sq.m and above only.

(b) Every basement shall be in every part at least 2.4m in height from the floor to underside of the roof slab or ceiling.

(c) The minimum height of the ceiling of any basement shall be 0.9m and the maximum height shall be 1.2m above the highest adjacent road level.

(d) Basement shall be with a setback of at least 1.5m in the sites of extent of up to 1000sq.m, 2m in the sites of extent of more than 1000sq.m and up to 2000sq.m, and 3m in the sites of extent of more than 2000sq.m from the property line. In case of more than one basement, 0.5m additional setback for every additional basement floor shall be insisted.

(e) Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills or breakable stall board lights or pavement lights or by way of shafts. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans, air-conditioning systems, etc.

(f) Alternatively, a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level.

(g) Adequate arrangement shall be made such that surface drainage does not enter the basement.

(h) The walls and floors of the basement shall be watertight and be so designed that the effect of the surrounding soil and moisture, if any, are taken into account in design and adequate damp proofing treatment is given.

(i) The access to the basement shall be either from the main or alternate staircase providing access to the building. When the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floors and having fire resistance rating [of not less than two hours]/as given in Tables 1 to 18 of Part IV of the NBC 2005.

(j) In case a lift is provided in a building (including residential buildings) the same may also serve the basement area.

(k) The exit requirements shall conform to the provisions of 'Fire and Life safety'.

(l) Basement floor shall be used only for parking and not for any habitation purpose. Parking can be permitted in one or more levels (multi-levels). In

case of basement being used as parking only, the travel distance shall be 45m.

(m) Parking in basement can also be permitted by means of a car lift. Wherever Mechanical system and car lifts are proposed enabling two tier parking, the required parking is computed accordingly.

(n) Common and Continuous basement parking floors between adjoining buildings would be allowed depending upon structural safety aspects, mutual agreement between owners, etc.

(o) Only in case of High Rise Buildings, up to 10% of basement may be utilised for utilities and non-habitation purpose like A/C Plant room, Generator room, Sewerage Treatment Plant (STP), Electrical installations, Laundry, etc. This is allowed only after fulfilling the required parking spaces.

(p) Building services such as electrical sub-stations, boiler rooms in basements shall comply with the provisions of the Indian Electricity Act/Rules. Boiler room shall be provided at the first basement along the periphery wall with fire resistance rating as given in Tables 1 to 18 of Part IV of the NBC 2005 or shall be separated with the blast wall.

(q) Stall board and pavement lights should be in positions easily accessible to the fire brigade and clearly marked 'SMOKE OUTLET' or 'AIR INLET' with an indication of area served at or near the opening.

(r) In multi-story basements, intake ducts may serve all basement levels, but each basement level and basement compartment shall have separate smoke outlet duct or ducts. Ducts so provided shall have the same fire resistance rating as the compartment itself. Fire rating may be taken as the required smoke extraction time for smoke extraction ducts.

(s) Mechanical extractors for smoke venting system from lower basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/smoke sensitive detectors or sprinklers, if installed, and shall have a considerably superior performance compared to the standard units. It shall also have an arrangement to start it manually.

(t) Mechanical extractors shall have an internal locking arrangement, so that extractors shall continue to operate and supply fans for HVAC shall stop automatically with the actuation of fire detectors.

(u) Mechanical extractors shall be designated to permit 30 air changes per hour in case of fire or distress call. However, for normal operation, air changes schedule shall be as given in Part 8, Building Services, Section 3, Air-conditioning, Heating and Mechanical Ventilation of National Building Code, 2005.

(v) Mechanical extractors shall have an alternative source of supply.

(w) Ventilating ducts shall be integrated with the structure and made out of brick masonry or reinforced cement concrete and when this duct crosses the transformer area or electrical switchboard, fire dampers shall be provided.

(x) If cutouts are provided from basements to the upper floors or to the atmosphere, all sides cutout openings in the basements shall be protected by sprinkler head at close spacing so as to form a water curtain in the event of a fire.

(y) The basement shall be partitioned and in no case compartment shall be more than 500sq.m and less than 50sq.m area except parking. Each

compartment shall have ventilation standards as laid down in the rules separately and independently. The partition shall be made in consultation with APSDR&FSD.

(z) It is essential to make provisions for drainage of any such water on all floors to prevent or minimize water damage of the contents. The drain pipes should be provided on the external wall for drainage of water from all floors. On large area floors, several such pipes may be necessary which should be spaced 30m apart. Care shall be taken to ensure that the construction of the drain pipe does not allow spread fire / smoke from floor to floor.

(aa) The staircase shall be situated at the periphery of the basement to be entered at ground level only, from outside open air.

(bb) The staircase shall communicate with basement through a lobby with self-closing doors with fire resistance rating as per relevant NBC code mentioned above.

(3) Bathroom and W.C:

Every bathroom or water closet shall

(a) be so situated that at least one of its walls shall open to external air.

(b) unless mechanically ventilated, it shall have a minimum opening in the form of window or ventilation opening to a shaft or open space, of area not less than 0.3sq.m with side not less than 0.3m.

(c) have the platform or seat made of watertight non-absorbent material.

(d) no room containing water closets shall be used for any purpose except as a lavatory.

(e) every water closet and/or a set of urinals shall have flushing cistern of adequate capacity attached to it.

(f) toilets / W.C. / Urinals are permitted within the building envelop in stilts area and basement or at ground level with subject to appropriate natural / artificial ventilation, drainage and sanitation provided the maximum size doesn't exceed 3sq.m.

(g) shall not open directly into any kitchen or cooking space by a door, window or other opening.

(h) every room containing WC shall have a door completely closing the entrance to it.

(i) not be directly over or under any room other than another water-closet, washing place, bath or terrace, unless it has water-tight floor.

(j) all the sewage outlets shall be connected to the municipal sewerage system. Where no such system exists, a septic tank shall be provided within the plot conforming to the requirements.

(k) be provided with an impervious floor covering, sloping towards the drain with a suitable grade and not towards veranda or any other room.

(l) Be enclosed by walls or partitions and the surface of every such wall or partition shall be finished with a smooth impervious material to a height of not less than 1m above the floor of such room.

(4) Boundary wall height:

Wherever applicable, the following norms shall apply.

(a) Front wall: 1.2m from highest adjacent road level to be solid (stone/brick/ masonry etc.).

(b) And above 1.2m and up to 2.0m it should be perforated (stone jali/iron grills/vegetation) to maintain visual continuity.

(c) Side walls and back wall: 2.4m from ground level to be solid (stone/brick/ masonry etc.).

(d) In case of corner buildings the height of boundary wall shall be restricted to 0.75m for length of 10m on the front and side of the inter-sections and the balance height of 0.75m if required may be constructed with the perforated stone jali/iron grills/vegetation) to maintain visual continuity.

(e) The above provisions are not applicable to the boundary walls of jails.

(f) In Industrial buildings of workshops and factories, electric sub-stations, transformer stations, institutional buildings like sanitoria, hospitals and educational buildings like schools, colleges, including hostels, and other public utility undertakings and strategically sensitive buildings a height up to 2.4m may be permitted.

(5) Canopy:

Canopy to be provided within the building envelope or in setback subject to setback conditions but inside plot line, however over the entrance in the front setback should not be more than 3m and inside setbacks may be up to the plot boundary or maximum 3m, whichever is less. Canopy can be at the structural floor level.

(6) Doorways

(a) Every doorway shall open into an enclosed stairway, a horizontal exit, on a corridor or passageway providing continuous and protected means of egress.

(b) No exit doorways shall be less than lm in width and in case of hospital and ward block it shall be 1.5m.

(c) Doorways for bathrooms, water closet, stores etc. shall be not less than 0.75m wide.

(d) Doorways shall not be less than 200cm in case of assembly buildings.

(e) Doorways shall be not less than 2m in height.

(f) Exit doorways shall open outwards, that is away from the room but shall not obstruct the travel along any exit. No door when opened shall reduce the required width of stairway or landing to less than 0.9m. Overhead or sliding door shall not be installed.

(g) Exit door shall not open immediately upon a flight of stairs. A landing equal to at least, the width of the door shall be provided in the stairway at each doorway. Level of landings shall be the same as that of the floor, which it serves.

(h) Exit doorways shall be openable from the side, which they serve without the use of a key.

(i) Revolving doors shall not be provided as a means of fire exit..

(j) Mirrors shall not be placed in exit ways or exit doors to avoid confusion regarding the direction of exit.

(7) Exit requirements:

The following general requirement shall apply to exits:

(a) Every building meant for human occupancy shall be provided with exits sufficient to permit safe escape of occupants in case of fire or other emergency.

(b) In every building exit shall comply with the minimum requirement of this part, except those not accessible for general public use.

(c) All exists shall be free of obstructions.

(d) No buildings shall be altered so as to reduce the number, width or portion of exits to less than required.

(e) Exits shall be clearly visible and the routes to reach exits shall be clearly marked and signs posted to guide the occupants of floor concerned.

(f) All exit ways shall be properly illuminated.

(g) Firefighting equipment where provided along exits shall be suitably located and clearly marked but must not obstruct the exit way and there should be clear indication about its location from either side of the exit way.

(h) Alarm devices shall be installed to ensure prompt evacuation of the occupants concerned through the exits, wherever required.

(i) All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

(j) Exits shall be so arranged that they may be reached without passing through another occupied unit, except in the case of residential buildings.

(8) Arrangement of Exits:

(a) Exits in non-sprinkled buildings shall be so located so that the travel distance on the floor shall not exceed 22.50m for residential, educational, institutional and hazardous occupancies and 30.0m for assembly, business, mercantile, industrial and storage occupancies.

(b) Whenever more than one exit is required for a floor of a building they shall be placed as remote from each other as possible.

(c) All the exits shall be accessible from the entire floor area at all floor levels.

(d) In case of sprinkled building the travel distance shall be increased by 1.5 times the mandatory distance.

(e) The travel distance to an exit from the remote point shall not exceed half the distance as stated above except in the case of institutional occupancy in which case it shall not exceed 6.0m.

(9) Capacity of Exits:

The capacity of exits (staircase, ramps and doorways) indicating the number of which persons could be safely evacuated through a unit exit width of 50cm shall be as given in the Table below.

TABLE - 7
Number of Occupants per unit Exit width

S. No.	Occupancy	Number of occupants		
		Stairways	Ramps	Doors
(A)	(B)	(C)	(D)	(E)
1	Residential/Educational/Institutional	25	50	75
2	Assembly	40	50	60
3	Business/Mercantile/Industrial/Storage	50	60	75
4	Hazardous	25	30	40

(10) Number and Size of Exits

(a) The requisite number and size of various exits shall be provided, based on the occupants in each room and floor based on the occupant load, capacity of exits, travel distance and height of buildings.

(b) At least one primary entrance to each building shall be usable by individuals in wheelchairs and shall be indicated by a sign.

(c) At least one entrance usable by individuals in wheel chairs shall be on a level that would make the elevators accessible.

(11) Types of Exits

(a) Exits shall be either horizontal or vertical type.

(b) An exit may be doorway, corridor and passage to an internal staircase or external staircase, ramp or to a verandah and/or terraces that have access to the street or to roof of a building.

(c) An exit may also include horizontal exit leading to an adjoining building at the same level.

(d) Lifts/ escalators and revolving doors shall not be considered as exits.

(12) Staircase Requirements

(a) For buildings such as assembly, business, education, hazardous, industrial, institutional, Mercantile Building, High Rise Building, Multi-Level Car Parking Building, Office Building (premises), Special Building, Storage Buildings and Wholesale Establishment, there shall be minimum of two staircases and one of them may be enclosed stairway and the other shall be on the external walls of building and shall open directly to the exterior, interior open space or to any open place of safety.

(b) Single staircase may be considered for Non-high-rise residential, educational, business or group housing society where floor area does not exceed 500 sq. m. and height of the building does not

exceed 18m (including Stilt Floor) and other requirements of occupant load travel distance and width of staircase shall meet the requirement.

(13) Stairways

(a) Interior stairs shall be constructed of non-combustible material throughout.

(b) Interior stairs shall be constructed as a self-contained unit with at least one side adjacent to an external wall and shall be completely enclosed unless mechanically ventilated.

(c) A staircase shall not be arranged round a lift shaft for buildings above 15.0m (18m with stilts) height. The staircase location shall be to the satisfaction of department of Fire Services.

(d) Hollow combustible construction shall not be permitted.

(e) The minimum width of internal staircase shall be as given in Minimum Width Provisions for Stairways [Sub-rule (14)].

(f) The minimum width of treads without nosing shall be 25cm for an internal staircase for residential buildings. In the case of other buildings, the minimum tread shall be 30cm. The treads shall be constructed and maintained in a manner to prevent slipping. Winders shall be allowed in residential buildings provided they are not at the head of a downward flight.

(g) The maximum height of riser shall be 19cm in the case of residential buildings and 15cm in the case of other buildings and these shall be limited to 12 per flight.

(h) Handrails shall be provided with a minimum height of 90cm from the centre of the tread.

(i) The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2 m.

(j) For building more than 24m in height, access to main staircase shall be through a lobby created by double door of half an hour fire rating. One of the doors will be fixed in the wall of the staircase and other after the lobby.

(k) No living space, store or other fire risk shall open directly into the staircase or staircases.

(l) External exit door of staircase enclosure at ground level shall open directly to the open spaces or can be reached without passing through any door other than a door provided to form a draught lobby.

(m) The main staircase and fire escape staircase shall be continuous from ground floor to the terrace level.

(n) No electrical shafts/AC ducts or gas pipe etc. shall pass through the staircase.

(o) Lift shall not open in staircase landing.

(p) No combustible material shall be used for decoration/wall paneling in the staircase.

(q) Beams/columns and other building features shall not reduce the head room/width of the staircase.

(r) The exit sign with arrow indicating the way to the escape route shall be provided at a suitable height from the floor level on the wall and shall be illuminated by electric light or glow sign or florescent connected to

corridor circuits. All exit way marking sign should be flush with the wall and so designed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipment's. Further all landings of floor shall have floor-indicating boards indicating the number of floor as per Building Rules. The floor indication board shall be placed on the wall immediately facing the flight of stairs and nearest to the landing. It shall be of size not less than 0.2m. x 0.5m.

(s) Individual floors shall be prominently indicated on the wall facing the staircase.

(t) In case of single staircase it shall terminate at the ground floor level and the access to the basement shall be by a separate staircase. However, the second staircase may lead to basement levels provided the same is separated at ground level either by ventilated lobby with discharge points at two different ends through enclosures.

(u) Any staircase made for use of Fire escape which will be open to sky (can be covered from top but sides to be open) will not be considered under FAR calculation.

(v) Fire Escape Staircases

(i) Fire escape shall not be taken into account while calculating the number of staircases for a building.

(ii) All fire escapes shall be directly connected to the ground.

(iii) Entrance to the fire escape shall be separate and remote from internal staircase.

(iv) The route to fire escape shall be free of obstructions at all times except the doorway leading to the fire escape which shall have the required fire resistance.

(v) Fire escape shall be constructed of non-combustible materials.

(vi) Fire escape stairs shall have straight flight not less than 125cm wide with 25cm treads and risers not more than 19cm and the number of risers shall be limited to 16 per flight.

(vii) Handrails shall be at a height not less than 100cm.

(viii) Fire escape staircase in the mercantile, business, assembly, hotel buildings above 24m height shall be a fire tower and in such a case width of the same shall not be less than the width of the main staircase. No combustible material shall be allowed in the fire tower.

(w) *Spiral Stairs* (fire escape)

(i) The use of spiral staircase shall be limited to low occupant load and to a building height of 9m.

(ii) A spiral stairs shall not be less than 150cm in diameter and shall be designed to give the adequate headroom.

(14) Minimum Width Provisions for Stairways

The following minimum width provisions shall be made for **each** stairway:

TABLE - 8

Minimum Width Provisions for Stairways

S. No.	Type of Building	Minimum width for each stairway (m)
(A)	**(B)**	**(C)**
1	Residential Non High Rise Buildings	1.00
2	Other Residential Buildings e.g. Apartments, Hostels, Group Housing, Guest Houses, etc.	1.25
3	Educational Buildings like Schools, Colleges	1.50
4	All other buildings including Hotels, Nursing Homes etc.	1.50
5	Institutional Buildings like Hospitals etc.	2.00
6	Assembly Buildings like Auditoria, Theatres and Cinemas	2.00

(15) Minimum Width Provisions for Passageway/Corridors

The following minimum width provisions shall be made for each passage way/corridor:

TABLE – 9

Minimum Width Provisions for Passageway/Corridors

S. No.	Type of Building	Minimum width (m)
(A)	**(B)**	**(C)**
1	Individual Residential buildings	1.00
2	Other Residential buildings, e.g. Hostels, Group Housing etc.	1.25
3	All Other Buildings including Hotels	1.50
4	Assembly Buildings like Auditoria, Theatres and Cinemas	2.00
5	Hospital, Nursing Homes, etc.	2.40
6	**Ramps-** for applicability in all other building types refer CHAPTER-IX-2 [PROVISIONS FOR DIFFERENTLY ABLED, ELDERLY & CHILDREN]	**Ramps & Gradients**

(16) Ramps

(a) Ramps shall not be allowed in the mandatory setbacks including building line, however ramps may be permitted in the side and rear setbacks after leaving minimum 7m of setback for movement of the fire-fighting vehicles.

(b) The ramps to basement and parking floors shall be with at least two ramps each with a minimum of 3.6m wide or one ramp with a

minimum of 5.4m wide, provided with gradient of 1:8 for cars and 1:15 for heavy vehicles. At curved portions of the ramp the slope should not be more than 1:12.

(c) The minimum width of the ramps in **Nursing Homes, Hospitals** shall be 2.4m for stretcher and not for vehicular movement and in the basement using car parking shall be 6.0m. At each floor one of the exit facilities shall be a ramp of not less than 2.4m in width. In this case the handrails shall be provided on both sides of the ramp.

(d) The maximum gradient of a ramp approach intended for the **Differently Abled persons** shall not exceed 1 in 10 and shall be finished with approved non-slippery materials. The minimum width of the ramp shall be 1.2m and provided with handrails of height not less than 80cm.

(e) Every part of a building within a floor shall be accessible by a wheel chair and in case of level difference between parts they shall be connected by ramp/slope ways with minimum specifications as above.

(f) All structural design / safety aspects as per latest BIS Codes and NBC shall be complied along with consideration of weight of Fire Engine and its maneuverings.

(g) Ramps shall lead directly to outside open space at ground level or courtyards or safe place.

(h) For building above 24.0m in height, access to ramps from any floor of the building shall be through smoke fire check door.

(i) For additional conditions, Sub-rule (16)-Ramps of Rule 6 - Requirement of Parts of Buildings of Chapter – IV-General Space Requirements & Services shall also be followed.

(j) Ramps with Gradients: Where ramps with gradients are necessary or desired, they shall conform to the following requirements:
   (i) A ramp when provided should not have a slope greater than 1 in 20 or maximum of 1 in 12 for short distance up to 9000mm.
   (ii) A ramp shall have handrails on at least one side, and preferably two sides, that are 900mm high, measured from the surface of the ramp, that are smooth, and that extend 300mm beyond the top and bottom of the ramp. Where major traffic is predominantly children, the handrails should be placed 760 mm high.

Notes

(1) Where handrails are specified to be of heights other than 80 cm, it is recommended that two sets of handrails be installed to serve all people. Where major traffic is predominantly children, particularly physically disabled children, extra care should be exercised in the placement of handrails, in accordance with the nature of the facility and the age group or groups being serviced

(2) Care should be taken that the extension of the handrails is not in itself a hazard. Extension up to 300mm may be made on the side of a continuing wall.

(3) A ramp shall have a surface that is non-slip surface and if length is 3500mm, the minimum width shall be 1500mm greatly assists the challenged persons with semi-ambulatory and ambulatory disabilities.
(4) Each ramp shall have at least 1800mm of straight clearance at the bottom.
(5) Ramps shall have level platforms at 10m to 12m intervals for purposes of rest and safety, and shall have platforms minimum 1.5m length wherever they turn.
(6) A ramp shall have a level platform at the top which is at least 1800 mm long, if a door swings out onto the platform or toward the ramp. This platform shall extend at least 300mm beyond each side of the doorway.
(7) For visually impaired people, ramps may be colour contrasted with landing.
(8) To minimize rise to wheelchair users, ramps should be equipped with herbs approximately 50mm high at exposed sides.

(17) Lifts and Escalators

(a) Provision of Lifts

(i) It shall be made mandatorily for all buildings which are 15m and above (without stilts) /18m and above (with stilts) in height.
(ii) For buildings less than 15m (without stilts)/18m (with stilts) the provision of lift is on the discretion of the owners in order to facilitate movement of elderly people.
(iii) All the floors including basement and terrace shall be accessible for 24hours by the lifts.
(iv) The lifts provided in the buildings shall not be considered as a means of escape in case of emergency.
(v) The lift machine room shall be separate and no other machinery shall be installed in it.
(vi) Grounding switch at ground floor level to enable the fire service to ground the lift car in case of emergency shall also be provided.

(b) Lifts in residential buildings

For all residential buildings with height 15m (without stilts) or 18m (with stilts), opening of lift may be allowed in the staircase landing, provided the landing is 1.5m wide and it does not obstruct movement in general and in emergency.

Note: For applicability in all other buildings, refer "Lifts" in CHAPTER-IX-2 [PROVISIONS FOR DIFFERENTLY ABLED, ELDERLY & CHILDREN])

(c) Escalators

Escalators may be permitted in addition to required lifts. Such escalators may be permitted in atrium area in shopping malls/public buildings.

(18) Kitchen

Every room to be used as a kitchen shall have

(a) Unless separately provided in a pantry, means for washing of kitchen utensils, which shall lead directly or through a sink to a grated and trapped connection to the waste pipe.
(b) An impermeable floor;

(c) At least a window not less than 1sq. m. or one tenth of the floor area whichever is more in area open directly to an interior or exterior open space, but not into a shaft (unless mechanically ventilated) and;

(d) Refuse Chutes in residential building of above 15m (without stilts)/ above 18m (with stilts) in height.

(19) Loft / Ledge or Tand

(a) Lofts shall be permitted in residential buildings and shops only.

(b) It shall not interfere with the ventilation of the room under any circumstances.

(c) Area of such loft shall be restricted to 25% of the covered area of respective floor.

(d) Maximum height between loft and ceiling shall be 1.5m.

(e) The clear height below the loft shall be 2.2m.

(20) Means of Access:

(a) No building shall be constructed as to deprive any other building of its means of access.

(b) Every person who erects a building shall not any time erect or cause or permit to erect or re-erect any building which in any way encroaches upon or diminishes the area set apart as means access.

(c) Means of access shall be as per the approved layout plan and simultaneously in accordance with the fire and life safety regulations.

(d) Main entrance to the premises shall be of adequate width to allow easy access to the fire tender and in no case it shall measure less than 6m. The entrance gate shall fold back against the compound wall of the premises, thus leaving the exterior access way within the plot free for movement of the fire service vehicles. If archway is provided over the main entrance the height of the archway shall not be of less than 5m in height.

(e) The Minimum Abutting Existing Road Width Required for various types of building activities shall be as given in these Rules. (Vide **Chapter-VII-Requirement of Approach Road for Building Sites/Plots**)

(21) Mezzanine floor:

(a) Mezzanine floor where provided is to be counted in FAR.

(b) Minimum clear height shall not be less than 2.2m and not more than 2.7m.

(c) If used as a living room shall not be less than 9.5sq. m.

(d) Aggregate area of mezzanine floor in a building shall in no case exceed one-third the plinth area of the building.

(e) Shall not be used as a kitchen.

(f) Shall not be sub-divided into smaller compartments.

(g) Shall not interfere with the ventilation of the space over and under it.

(h) In no case shall a mezzanine floor be closed so as to make it liable to be converted into unventilated compartments.

(22) Provision of exterior open spaces and height limitation around the building

The dimensions of exterior open spaces (setbacks) and heights for Non-High Rise and High Rise Buildings shall be provided as given separately in these Rules respectively for such buildings.

(a) Exterior open spaces

(i) For all buildings including High-rise buildings, the open spaces/setbacks, covered area, FAR if any shall be as per Master Plan/Zonal Plan requirements and as per these Rules.

(ii) Every room that is intended for human habitation shall abut on an interior or exterior open space or on to a verandah open to such interior or exterior open space.

(iii) In case of High-rise buildings, the exterior open spaces around a building shall be of green or hard surface capable to taking the load of fire engine weighing up to 45tonnes.

(iv) In case, kitchen and toilets do not abut either interior or exterior open spaces, mechanical ventilation would be provided.

(v) Up to 25% of the total setback area can be sunk for light, ventilation and access to basement, provided fire tender movement is not hindered.

(b) Height Limit

(i) If a building abuts on two or more streets of different width, the building shall be deemed to face upon the street that has the greater width and the height of the building shall be regulated by the width of that street. Height shall however, not exceed the maximum height as provided in the Master Plan/Zoning Development Plan/Zoning Regulations/these Rules.

(ii) For buildings in the vicinity of the aerodromes, the maximum height of such buildings shall be subject to clearance from the Airport Authority of India.

(iii) Height Exemptions

The following appurtenant structures shall not be included in the height of building covered under Building Rules.

(1) Roof tanks and their supports not exceeding 1.5m in height.

(2) Ventilating, air conditioning and lift rooms and similar service equipment.

(3) Stair covered with Mumty not exceeding 3.00m in height.

(4) Chimneys and parapet wall not exceeding 1.50m.

(23) Interior Open Space for Light and Ventilation

(a) The whole or part of one side of one or more rooms intended for human habitation and not abutting on either the front, rear or side open spaces shall abut on an interior open space or an internal courtyard or chowk, whose minimum dimensions shall not be less than 9sq.m with no side shall be less than 2m for buildings up to 15m in height (excluding Stilt Floor).

(b) For buildings with above 15m in height (excluding Stilt Floor), the minimum dimensions of the internal courtyard shall be with an area of not less than 25sq. m and no side shall be less than 3m in width.

(c) All such court yards / ducts may be allowed above stilt floor.

(d) Sunken Courtyard: Sunken courtyard up to 3m in depth from the ground level as 'light well' within building envelop shall be permitted for light and ventilation for basement area.

(e) Skylight: Skylight in interior open space (courtyard) may be permitted subject to it may not act as a coverage space on the ground floor and not violate the maximum/minimum ground coverage rules.

(24) Lighting and ventilation of rooms

(a) All habitable rooms shall have for the admission of light and air, one or more apertures, such as window, glazed door and fan lights, opening directly to the external air or into an open verandah not more than 2.4m in width.

(b) Where the lighting and ventilation requirements are not met through day lighting and natural ventilation, the same shall be ensured through artificial lighting and mechanical ventilation as given in Part-VII Building Services Section-1 - Lighting and Ventilation of National Building Code of India.

(c) Notwithstanding the above, the minimum aggregate area of openings of habitable rooms and kitchens excluding doors shall not be less than 1/10 of the floor area.

(d) No portion of a room shall be assumed to be lighted if it is more than 7.50m from the opening assumed for lighting that portion.

(25) Ventilation Shaft for water closets and bathrooms

For ventilating the spaces for water closets and bathrooms, if not opening on the front side, rear and interior open spaces, shall open on the ventilation shaft, the size, of which shall not be less than the values given below. However, it is not mandatory in case of buildings where mechanical ventilation is available.

TABLE - 10
Size of Ventilation Shaft

S. No.	**Building Height** (m)	**Size of ventilation shaft** (sq. m)	**Minimum size of shaft** (m)
(A)	**(B)**	**(C)**	**(D)**
1	Up to 10	1.0	1.0
2	Up to 12	3.0	1.2
3	Up to 18	4.0	1.5
4	Up to 24	6.0	1.8
5	Above24	9.0	3.0

(26) Joint Open Air Space

(a) Every interior or exterior or air space, unless the latter is a street, shall be maintained for the benefit of such building exclusively and shall be entirely within the owner's own premises.

(b) If such interior or exterior open air space is intended to be used for the benefit of more than one building belonging to the same owner; then the width of such open air space shall be the one specified for the tallest building as specified in building rules, abutting on such open air space.

(27) Restrictions on Projections in Mandatory Open Spaces

The following are the Restrictions on Projections in the mandatory open spaces / setbacks / interior open spaces:

(a) Every interior or exterior open space shall be kept free from any erection thereon and shall be open to the sky. Nothing except Cornice, Chajjas/weather shades only of width not exceeding 75cm shall be allowed in the mandatory setbacks. Such projections shall not be allowed at a height less than 2.20m from the corresponding finished floor level.

(b) No balcony projections or corridor shall be permitted projecting within the mandatory open spaces/setbacks in case of non-high rise buildings. These, if provided for, shall be set back as per the minimum mandatory open spaces and the setbacks shall be clear from the edge of the balcony or corridor. However, a Portico or Canopy without access to the top may be considered in the front open space.

(c) Pergola shall be permitted in a residential building if constructed in the exterior open spaces within setback or terrace. Such pergola shall not exceed 10% of ground coverage. Such pergolas shall have a minimum clear height of 2.2 m.

(d) In case of Individual Residential Building in plots more than 300sq.m:

(i) In the front setback only a security guard booth of 2sq.m is allowed.

(ii) In the rear and side open spaces Septic tank, well, parking sheds, generator room may be allowed.

(iii) A setback of at least 1m from the property or boundary line of the plot shall be provided for these structures.

(iv) The height of these accessory buildings shall not be more than 2.5m and shall not occupy more than $1/4^{th}$ of the plot width. These shall be so located that they do not hinder the fire safety measures and operations.

(28) Not to include in FAR calculations

(a) Machine room for lift on top floor as required for the lift machine installation.

Note: The shaft provided for lift shall be taken for FAR calculations only on one floor.

(b) Mumty over staircase on top floor.

(c) Watch and ward cabins of area not more than 4.5sqm at the entry point.

(d) Entrance porches/canopies in high rise buildings.

(e) All pergolas at any level.

(f) Architectural feature on ground or any other floor including rooftops.

(g) Sky bridges or intermittent floors as relief in high rise buildings having landscape areas jogging tracks, swimming pools and other public spaces. Swimming pool and related amenities at roof tops and on sky bridges.

(h) Rockery, well and well structures, plant nursery, water pool, swimming pool (if uncovered), platform round a tree, tank, fountain, bench, chabutara with open top and / or unenclosed sides by walls, open ramps, compound wall, gate, slide swing door, uncovered staircase (uncovered and unclosed on three sides except for a 0.90 m high railing/wall, overhead water tank on top of building/open shafts, cooling towers as per fire norms. Fire tender movement shall be unhindered.

(29) Parapet

(a) Parapet walls and handrails provided on the edges of roof terrace, balcony, verandah etc. should not be less than 1.0 m and more than 1.5 m in height.

(b) The above condition shall not apply where roof terrace is not accessible by a staircase.

(c) However on terrace floor in the portion where installations like DG Set, Water Tank and other, screening parapet of a suitable height may be constructed to hide such equipment etc. and there is no need to have uniformly increased height of the parapet.

(30) Parking Spaces

(a) The parking spaces should be efficiently designed and clearly marked and provided with adequate access, aisle, drives and ramps required for maneuvering of vehicles.

(b) The parking spaces may be provided in

i. Basements or cellars (one or more) / multi-level (allowed for plots 750sq.m and above only) or

ii. Stilt floor or in upper floors (at any level) or

iii. The Open space over and above the setbacks i.e. after leaving the setbacks to be left around the building with adequate vehicular access, aisle, drives, ramps required for maneuvering of vehicles, or

iv. Common pool parking area (in the case of Group Housing Scheme / Cluster Housing / Row Housing Schemes).

v. Any of the above or all the above or combination of the above.

vi. Wherever Mechanical system and car lifts are proposed enabling two tier parking, the required parking is computed accordingly.

(c) In respect of Apartment Complexes / Building / Block of residential nature, in sites up to 750sq.m the Parking requirement shall be deemed to be met if the entire stilt floor is left for parking.

(d) Common and Continuous basement parking floors between adjoining buildings would be allowed depending upon structural safety aspects, mutual agreement between owners, etc.

(e) In the Stilt floor a watchman room and 2 toilets (W.C), with maximum built up area of 25sq.m may be allowed. Such space shall not be disposed and shall be part of common facility of the complex. For the sites above 750sq.m area such use is permitted subject to fulfillment of parking requirement as per the above Table (Parking Area to be provided in all Buildings).

(f) For parking spaces in basements and upper floors, at least two ramps of minimum 3.6m width or one ramp of minimum 5.4m width and adequate slope 1 in 8 shall be provided. Such ramps shall not be allowed in mandatory setbacks including building line, however they may be permitted in the side and rear setbacks after leaving minimum 7m of setback for movement of fire-fighting vehicles. Access to these may also be accomplished through provisions of mechanical lifts.

(g) The minimum width of the drive way shall be 4.5m.

(h) In case where the permissible set back is less than 4.6m the pillars position in stilt floor shall be so designed that there shall be clear space of 3.6m (excluding Greenery) is available for movement of vehicles.

(i) Visitors' parking shall be provided with minimum 10% of the parking area mentioned in the above Table (Parking Area to be provided in all Buildings) and may be accommodated in the mandatory setbacks other than front setback where ever such setbacks are more than 6m (excluding green strip). However this is not permissible in case of transfer of setback. The Visitors' Parking facility shall be open to all visitors which shall be properly demarcated on ground.

(j) Misuse of the area specified for parking of vehicles for any other use shall be summarily demolished / removed by the Enforcement Authority.

(k) The Parking Area shall be provided as given in Table below.

TABLE - 11
Parking Area to be provided in All Buildings

Sl. No.	Category of building/activity	Parking area to be provided as percentage of total built up area	
		Municipal Corporations & Selection Grade, Special Grade Municipalities	**First Grade, Second Grade Municipalities, Nagar Panchayats and Gram Panchayats in Master Plan areas and in Development Authority Areas**
(A)	**(B)**	**(C)**	**(D)**
1	Multiplexes	**60**	**50**
2	Information Technology Enabling Services Complexes, Shopping Malls (above 4000sq. m),	**50**	**40**
3	Business buildings, Cinema halls, Hotels, Kalyana Mandapams, Lodges, Offices, Other Commercial buildings, Restaurants & High-Rise Buildings / Complexes of Non Residential Category	**30**	**25**
4	Colleges, Godowns, Hospitals, Industrial buildings, Institutional buildings, Residential Apartment Complexes, Schools, Educational Buildings & Other Buildings	**20**	**20**

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CHAPTER – V

PROVISIONS FOR STRUCTURAL SAFETY OF BUILDINGS

7. Structural Design and Safety

(1) For any building under the jurisdiction of these Rules structural design/retrofitting shall only be carried out by qualified Structural Engineer.

(2) Proof checking of various designs/reports shall be carried out by the Sanctioning Authority or an Agency authorized by the Sanctioning Authority as per Table - 12 wherever applicable.

(3) The Sanctioning Authority may consider to grant exemption for submission of working drawing, structural drawing and soil investigation report in case

(a) The height of the building is less than 10m (excluding Stilt floor).

(b) It is satisfied that in the area where the proposed construction is to be taken, similar types of structure and soil investigation reports are already available on record.

(c) If the local site conditions do not require any soil testing or if a soil testing indicates that no special structural design is required.

(d) Structural Design Basis Report (Form No. 6) has to be submitted, duly filled in case of a small building of load bearing structure up to Ground + 2 floors.

(4) Additional provisions for natural hazard prone areas:

The structural design of foundations, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete and structural steel shall conform to the provisions of Part 6:Structural Design of National Building Code of India (NBC), comprising –

Section–1 Loads, Forces and Effects

Section–2 Soils and Foundations

Section–3 Timber and Bamboo

Section–4 Masonry

Section–5 Concrete

Section–6 Steel

Section–7 Prefabrication Systems, Building and Mixed/Composite Construction

(5) The same shall be followed duly taking into consideration the Indian Standards as given below:

(a) For General Structural Safety

(i) IS: 456:2000 "Code of Practice for Plain and Reinforced Concrete".

(ii) IS: 800-2007 "Code of Practice for General Construction in Steel".

(iii) IS: 801-1975 "Code of Practice for Use of Cold Formal Light Gauge Steel Structural Members in General Building Construction".

(iv) IS: 875 (Part 2):1987 "Design loads (other than earthquake) for buildings and structures Part 2 Imposed Loads". [Occupant Load a building may be considered for Design Load].

(v) IS: 875 (Part 3):1987 "Design loads (other than earthquake) for buildings and structures - Part 3 Wind Loads".

(vi) IS: 875 (Part 4):1987 "Design loads (other than earthquake) for buildings and structures- Part 4 Snow Loads".

(vii) IS: 875 (Part 5):1987 "Design loads (other than earthquake) for buildings and structures - Part 5 special loads and load combination".

(viii) IS: 883:1994 "Code of Practice for Design of Structural Timber in Building".

(ix) IS: 1904:1986 (R 2005) "Code of Practice for Structural Safety of Buildings: Foundation".

(x) IS: 1905:1987 "Code of Practice for Structural Safety of Buildings: Masonry Walls".

(xi) IS: 2911(Part 1): Section 1: 2010 "Code of Practice for Design and Construction of Pile Foundation Section 1".

Part 1: Section 2 Bored Cast-in-situ Piles

Part 1: Section 3 Driven Precast Concrete Piles

Part 1: Section 4 Bored Precast Concrete Piles

Part 2: Timber Piles

Part 3: Under Reamed Piles

Part 4: Load Test on Piles

(b) For Cyclone/Wind Storm Protection

(i) IS: 875 (3):1987 "Code of Practice for Design Loads (other than Earthquake) for Buildings and Structures, Part 3, Wind Loads".

(ii) Guidelines (Based on IS 875 (3)-1987) for improving the Cyclonic Resistance of Low rise houses and other building.

(c) For Earthquake Protection

(i) IS: 1893 (Part 1)-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)".

(ii) IS:13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice".

(iii) IS:4326-2013 "Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)".

(iv) IS:13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines".

(v) IS:13827:1993 "Improving Earthquake Resistance of Earthen Buildings- Guidelines".

(vi) IS:13935-2009 "Seismic Evaluation, Repair and Seismic Strengthening of Buildings -Guidelines".

(d) For Protection of Landslide Hazard

(i) IS: 14458 (Part 1): 1998 "Guidelines for retaining wall for hill area: Part 1 Selection of type of wall".

(ii) IS: 14458 (Part 2): 1997 "Guidelines for retaining wall for hill area: Part 2 Design of retaining/breast walls".

(iii) IS: 14458 (Part 3): 1998 "Guidelines for retaining wall for hill area: Part 3 Construction of dry stone walls".

(iv) IS: 14496 (Part 2): 1998 "Guidelines for preparation of landslide – Hazard zonation maps in mountainous terrains: Part 2 Macro-zonation".

Note: *Where an Indian Standard or the National Building Code is referred, the latest revision of the same shall be followed except specific criteria, if any, mentioned above against that code.*

8. Buildings with Soft Storey

(1) In case buildings with a flexible storeys, such as the ground storey consisting of open spaces for parking that is *"Stilt buildings"* or any other storey with open halls, special arrangements are to be made to increase the lateral strength and stiffness of the soft/open storey such as Steel bracing/Shear walls/Brick infills between columns.

(2) Dynamic analysis of building is to be carried out including the strength and stiffness effects of infills and inelastic deformations in the members, particularly, those in the *soft storey*, and the structural members are to be designed accordingly.

(3) Alternatively, the following design criteria are to be adopted after carrying out the earthquake analysis, neglecting the effect of infill walls in other storeys:

(a) The columns and beams of the soft storey shall be designed for 2.5 times the storey shears and moments, calculated under seismic loads specified in the other relevant clauses; or,

(b) Besides the columns designed and detailed for the calculated storey shears and moments, shear walls shall be placed symmetrically in both directions of the building as far away from the centre of the building as feasible; to be designed exclusively for 1.5 times the lateral storey shear force calculated as before.

(c) For details of design and provisions, IS 1893, Part 1 shall be referred.

9. Structural requirements of low income housing

Notwithstanding anything contained herein, for the structural safety and services for development of low income housing the relevant provisions of applicable IS: 8888 Part 1 shall be enforced along with Annex C of Part 3 NBC, 2005.

10. Seismic strengthening/retrofitting

Prior to seismic strengthening/retrofitting of any existing structure, evaluation of the existing structure as regards structural vulnerability in the specified wind/seismic hazard zone shall be carried out by a Structural Engineer. If as per the evaluation of the Structural Engineer the seismic resistance is assessed to be less than the specified minimum seismic resistance as given in the note below, action will be initiated to carry out the upgrading of the seismic resistance of the building as per applicable standard guidelines.

Note:

(i) For masonry buildings reference shall be made to IS 4326 and IS 13935.

(ii) For concrete buildings and structures reference shall be made to IS15988: 2013 Seismic evaluation and strengthening of existing RCC buildings.

11. Structural Design Basis Report (SDBR)

(1) In compliance of the design with the above Indian Standard, the Structural Engineer will submit a structural design basis report in the Proforma covering the essential safety requirements specified in the Standard.

(2) The "Structural Design Basis Report (SDBR)"consists of four parts (FormNo.6, MHA Expert Committee Report)

Part 1: General Information/ Data

Part 2: Load Bearing Masonry Buildings

Part 3: Reinforced Concrete Buildings

Part 4: Steel Buildings

(3) Drawings and Documents to be submitted for approval of appropriate authorities shall include SDBR as detailed below:

Part 1: Completed

Part 2: (if applicable) – completed

Part 3: (if applicable)–undertaking that completed Part 3 will be submitted before commencement of construction.

Part 4: (if applicable)–undertaking that completed Part 4 will be submitted before commencement of construction.

(4) SDBR as detailed below shall be submitted to the appropriate authority as soon as design of foundation is completed, but not later than one month prior to commencement of construction.

Part 1: Completed

Part-2, Part-3 or Part-4: (if applicable) Completed.

12. Review of Structural Design

(1) The Authority shall create a Structural Design Review Panel (SDRP) consisting of Reputed Engineering Colleges whose task will be to review and certify the design prepared whenever referred by the Authority.

(2) The Reviewing Agency shall submit addendum to the certificate or a new certificate in case of subsequent changes in structural design.

(3) The Table below gives requirements of SDRP for different seismic zones namely III, IV and V and for structures of different complexities.

(4) In seismic Zone II, buildings & structures greater than 40m in height will require proof checking by SDRP as per detail at Sl. No.3 of the Table given below.

(5) It will be seen from the Table given below that there is a wide range of structure typology, and the requirement by the Authority for third party verification will depend on the type of structure.

TABLE - 12

Proof Checking Requirements for Structural Design

Sl. No.	Type of Structure	Submission from SER or SDAR	To be Proof Checked
(A)	(B)	(C)	(D)
1	Load Bearing Buildings up to 10m height	Structural Design Basis Report (SDBR)	Not to be checked
2	Buildings up to 18m height (including Stilt floor) (R.C.C/Steel framed structure)	SDBR	To be checked
		Preliminary design	To be checked
3	Building greater than 18m height (including Stilt floor) (R.C.C/Steel framed structure)	SDBR	To be checked
		Preliminary design	To be checked
		Detailed structural design and structural drawings	To be checked
4	Special Structures	SDBR	To be checked
		Preliminary design	To be checked
		Detailed structural design and structural drawings	To be checked

Notes:

(i) At the preliminary proposal stage of a project, the objective is to undertake feasibility study/comparison of a number of possible alternatives of structural schemes and determine the most cost effective one, detailed structural calculations are not necessary for each alternative scheme. However, it is necessary to determine the member sizes and reinforcement content in order to determine the cost. By making conservative assumptions it is possible to derive simplified calculations for both analysis and design. ***This is called "Preliminary or approximate analysis, and design".***

*(ii) After the most cost effective scheme is selected and signed-off by the Owner, the detailed calculations are performed on the selected scheme to determine the precise structural members and composition (size, dimension and stress behavior), and this is called the "**Detailed structural design**".*

(iii) In the aforesaid, the design of structural members is typically assumed to account for all the stress loads identified from section xx to be applicable in the given project.

(iv) Special structure means large span structures such as stadium, assembly halls, or tall structures such as water tanks, TV tower, chimney, etc.

13. Certification regarding structural safety in design and constructional safety

(1) Structural Engineer shall give a certificate of structural safety of design as per proforma given in **Form-3** and **Form 14** of the MHA Expert Committee Report at the time of completion.

(2) Supervision

All constructions except load bearing buildings up to three storeys shall be carried out under the supervision of the Structural Engineer for various seismic zones.

(3) Certification of structural safety in construction

The Structural Engineer shall give a certificate of structural safety of construction as per proforma given in **Form-13** of the MHA Expert Committee Report at the time of completion.

14. Quality Control, Construction Practices and Safety

(1) All material and workmanship shall be of good quality conforming generally to accepted standards and Indian Standard Specifications and Codes as included in Part-V Building Materials and Part-VII Construction practices and safety of National Building Code of India.

(2) Inspection

All the constructions for high-rise buildings, public buildings and special structures shall be carried out under quality inspection program prepared and implemented under the Quality Auditor in seismic zones IV & V.

(3) Certification of safety in quality of construction

Quality Auditor shall give a certificate of quality control as per proforma given in the prescribed Form.

15. Inspection

The general requirement for inspection of the development shall also include the following.

(1) General Requirements

The building unit intended to be developed shall be in conformity with Rules on requirement of site. Generally all development work for which permission is required shall be subject to inspection by the Authority as deemed fit.

The applicant shall keep a board at site of development mentioning the survey No, city survey No, Block No, Final Plot No., Sub plot No., etc. name of owner and name of Architect, Engineer, Developer, Structural Engineer, Construction Engineer if any and also the details of the approval given by the Authority.

(2) Record of Construction Progress

(a) Stages for recording progress certificate and checking:-

   (i) Plinth, in case of basement before the casting of basement slab.

   (ii) First storey.

   (iii) Middle storey in case of High-rise building.

   (iv) Last storey.

(b) At each of the above stages, the Owner/Developer/Builder shall submit to the designated officer of the Sanctioning Authority a progress certificate in the given formats (Form No. 7-10, of the MHA Expert Committee Report). This progress certificate shall be signed by the Structural Engineer.

(c) The progress certificate shall not be necessary in the following cases:

   (i) Alteration in Building not involving the structural part of the building.

   (ii) Extension of existing residential building on the ground floor up to maximum 15sq.m in area.

(d) Completion Report

   (i) It shall be incumbent on every applicant whose plans have been approved, to submit a completion report in Form No.11 of the MHA Expert Committee Report.

   (ii) It shall also be incumbent on every person / agency who is engaged under the Rules to supervise the erection or re- erection of the building, to submit the completion report in Form No.12 and 13 of the MHA Expert Committee Report prescribed under these Rules.

   (iii) No completion report shall be accepted unless completion plan is approved by the Authority.

(e) The final inspection of the work shall be made by the concerned Authority within 15 [Fifteen] days from the date of receipt of notice of completion report.

(f) The developers shall install CCTVs at construction sites of all Commercial Buildings, Group Development Schemes and High-Rise Buildings connecting to A.P State Fibernet Limited Network to analyze the information.

16. Issue of Occupancy Certificate

The Authority, before issuing occupancy certificate shall ensure that following are complied with from consideration of safety against natural hazard:

(1) Certificate of lift Inspector has been procured & submitted by the owner, regarding satisfactory erection of Lift.

(2) The Certificate from the Disaster Response and Fire Services Department with regard to the provision of fire safety as required under the Andhra Pradesh Fire Service Act, 1999 has been complied with and submitted by the owner.

(3) The occupancy certificate shall not be issued unless the information is supplied by the Owner and the Architect, Structural Engineer concerned in the schedule as prescribed by the Sanctioning Authority from time to time.

(4) For obtaining the Occupancy Certificate, the owner shall submit a notice of completion through the registered architect and licensed builder/developer along with prescribed documents and plans and Final NOC from the Andhra Pradesh Disasters Response and Fire Services Department to the Building Approving Authority. The Building Approving Authority on receipt of such notice of completion shall undertake inspection with regard to the following aspects and shall communicate the approval or refusal of the occupancy Certificate within 15 days.

(a) Number of floors
(b) External setbacks
(c) Parking space provision
(d) Abutting road width
(e) Rain Water Harvesting Structures, as applicable.
(f) Solar roof top structures, as applicable.
(g) Recycle of water treatment plants, as applicable.

17. Protective Measures in Natural Hazard Prone areas [Wherever applicable]

In natural hazard prone areas identified under the land use zoning regulations, structures buildings and installations which cannot be avoided, protective measures for such construction/development should be properly safeguarded based on the suggestion given in the Report of the MHA Expert Committee - Volume I.

18. Alternative Materials, Methods of Design and Construction and Tests

(1) The provisions of the Rules are not intended to prevent the use of any material or method of design or construction not specifically prescribed in them provided any such alternative has been approved.

(2) The Authority may approve any such alternative, provided it is found that the proposed alternative is satisfactory and conforms to the provisions of the relevant parts regarding materials, design and construction, method of work offered for the purpose intended, at least equivalent that prescribed in the rules in quality, strength, compatibility, effectiveness, fire, water and sound resistance, durability and safety.

(3) Tests: Whenever there is insufficient evidence of compliance with the provisions of these rules or evidence that any material or method of design or construction does not conform to the requirement of the rules, in order to substantiate claims for alternative materials, design or methods of construction, the Authority may require tests sufficiently in advance as proof of compliance. These tests shall be made by approved agency at the expense of the owner. This clause shall not apply to the materials with BIS Certificate.

(4) Test Methods shall be as per the relevant IS Codes.

(5) Test Result Copies shall be retained by the Authority for a period of not less than two years after the acceptance of the alternative materials. The testing of materials as per the Indian Standards shall be carried out by the laboratories approved by the concerned Authority on this behalf.

19. Maintenance of Buildings

(1) In case of buildings older than fifty years, it shall be the duty of the owner of a building, to get his building inspected by a Registered Structural Engineer within a year from the date of coming into force of these Rules or as decided by the Authority. The Structural Inspection Report Form No.16, of the MHA Expert Committee Report shall be produced by the Owner to the Concerned Authority. If any action, for ensuring the structural safety and stability of the building is to be taken, as recommended by Structural Engineer, it shall be completed within the time period as stipulated by the Authority.

(2) The Owner/developer/occupant on the advice of such experts shall carry out such repair/restoration and strengthening/retrofitting of the building found necessary so as to comply with the safety standards.

(3) In case, the owner/developer/occupant does not carry out such action, the Authority or any agency authorized by the Authority may carry out such action at the cost of the owner/developer/occupant.

20. Building Services

(1) Electrical Installations
The Planning, design and installation of electrical installation, air-conditioning and heating work shall conform to the provisions of Part VIII Building Services; Section 2 – Electrical Installations; Section – 3 Air-conditioning and Heating of NBC.

(2) Plumbing Service
The Planning, design and installation of water supply systems, drainage, sanitary installations and gas supply installations in buildings shall be in accordance with Part XI Plumbing Services; Section 1-Water supply; Section 2-Drainage and Sanitation and Section 3 – Gas supply of NBC.

(3) Lifts

(a) The Planning, design and installation of lifts including their number, type and capacity depending on the occupancy of the building, the population on each floor based on the occupant load of the building, height shall be in accordance with Section 5 – Installation of Lifts and Escalators of NBC.

(b) Maintenance: The lift installation should receive regular cleaning, lubrication, adjustment and adequate servicing by authorized competent persons at such intervals as the type of equipment and frequency of service demand. In order that the lift installation is maintained at all times in a safe condition, proper maintenance schedule shall be drawn up in consultation with the lift manufacturer and rigidly followed. A log book to record all items relating to general servicing and inspection shall be maintained, the electrical circuit diagram of the lift with the sequence of operation of different components and parts shall be kept readily available for reference by persons responsible for the maintenance and replacement, where necessary to the satisfaction of the Authority.

(c) Any accident arising out of operation and maintenance of the lifts shall be duly reported to the Authority.

Note: Ministry of Home Affairs [MHA] Expert Committee Report on Structural Safety, 2005 is available at the National Disaster Management Authority [NDMA] website.

URL: http://www.ndma.gov.in/images/disaster/earthquake/volume1.pdf

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CHAPTER - VI

FIRE PROTECTION AND FIRE SAFETY REQUIREMENTS

21. Applicability

As per the provisions of the Andhra Pradesh Fire Service Act, 1999, Residential buildings of height more than 18m, Commercial buildings of height 15m and above and buildings of public congregation like Educational Buildings, Cinema Theatres, Function Halls and other Assembly Buildings on plot area of 500Sq.m. and above or of height above 6m are required to obtain prior clearance from Andhra Pradesh State Disaster Response & Fire Services Department from fire safety point of view.

22. Procedure for Clearance from Andhra Pradesh Fire Service Act, 1999

(1) The applicant shall apply to the Andhra Pradesh State Disaster Response & Fire Services Department [APSDR&FSD] in the prescribed form for obtaining clearance for the buildings referred under the provisions of the Andhra Pradesh Fire Service Act, 1999.

(2) The applicant shall submit prescribed number of complete set of building plans duly signed/certified by a licensed Fire Consultant/Architect along with prescribed fee and also other documents as specified by the APSDR&FSD.

(3) The plans shall be clearly marked and indicated the complete fire protection arrangements and the means of access/escape for the proposed building with suitable legend along with standard signs and symbols on the drawings. The information regarding fire safety measures shall be furnished as prescribed along with details.

(4) The APSDR&FSD shall examine these plans to ensure that they are in accordance with the provisions of fire safety and means of escape as per these rules and shall forward two sets of plans duly signed for implementation to the building sanctioning Authority.

23. Procedure for obtaining the Occupancy Certificate

(1) After completion of the building and firefighting installations as approved by the building sanctioning Authority and APSDR&FSD and duly tested and certified by the licensed Fire Consultant/Architect, the Owner/Builder of the building shall approach the APSDR&FSD for obtaining clearance from fire safety and means of escape point of view. The concerned Authority shall ensure that clearance from APSDR&FSD has been obtained before granting the occupancy certificate.

(2) On receipt of the above request, the APSDR&FSD shall issue the No Objection Certificate from fire safety and means of escape point of view after satisfying itself that the entire fire protection measures are implemented and functional as per approved plans.

(3) Any deficiencies observed during the course of inspection shall be communicated to the concerned building owner/builder for rectification and a copy of the same shall be forwarded to the building sanctioning Authority.

24. Renewal of Fire Clearance

On the basis of undertaking given by the Fire Consultant/Architect, the APSDR&FSD shall renew the fire clearance in respect of the following buildings on annual basis:

(1) Assembly Buildings

(2) Business and Mercantile Buildings of height above 15m

(3) Educational Buildings

(4) Institutional Buildings

(5) Public Buildings

25. Fee

As prescribed by the APSDR&FSD, the necessary fee shall be paid by the Applicant along with the application.

26. Fire Consultant

The Architect of the project duly consulting a Fire Consultant, will be responsible for making provisions for fire protection and firefighting measures as provided in the rules and as prescribed by the APSDR&FSD. The APSDR&FSD shall issue the list of qualified Fire Consultants so as to facilitate the applicants in taking their assistance.

27. Terminology

All the technical terms shall have the meaning as defined in National Building Code of India, Part-IV-Fire Protection as amended from time to time but for the terms which are defined otherwise in these rules.

28. General

The APSDR&FSD may insist on suitable provisions in the building from fire safety and means of escape point of view depending on the occupancy, height or on account of new developments creating special fire hazard, in addition to the provision of these rules and Part-IV-Fire Protection of National Building Code of India.

(1)Fire Resistance of Types of Constructions/Building Components

The resistance ratings of various types of construction for structural and non-structural members shall be as given in Table 1 of Part-IV of NBC, 2005. Building elements/components such as walls, columns, beams and floors shall have the requisite fire resistance rating in accordance with the accepted standards at Tables 2 to 18 of Part-IV of NBC.

(2)Means of Access

As provided in the rules.

(3)Exterior Open Spaces around the Building

As provided in these rules.

(4)Exit Requirement

As provided in these rules/Section4.2 of Part 4 of NBC, 2005.

(a) ***Type of Exits:*** As provided in these rules /Section4.2.1 of Part 4 of NBC, 2005.

(b) ***Occupant Load:*** As provided in these rules/Section4.3 of Part 4 of NBC, 2005.

(c) ***Capacity of Exit:*** As provided in these rules /Section4.4 of Part 4 of NBC, 2005.

(d) ***Arrangements of Exits:*** As provided in these rules/Section4.5 of Part 4 of NBC, 2005.

(e) ***Number of Exits:*** As provided in these rules /Section4.6 of Part 4 of NBC, 2005.

(f) ***Doorways:*** As provided in these rules/Section4.7 of Part 4 of NBC, 2005.

(g) ***Minimum Width Provision for Passageway/Corridors:*** As provided in these rules/Section4.8 of Part 4 of NBC, 2005.

(h) ***Staircase Requirements:*** As provided in these rules/Section4.9 of Part 4 of NBC, 2005.

(i) ***Stairways:*** As provided in these rules /Section4.9 of Part 4 of NBC, 2005.

(j) ***Minimum Width Provision for Stairways:*** As provided in these rules/Section4.9.6 of Part 4 of NBC, 2005.

29. Fire Escapes or External Stairs

(1) Fire Escape Staircases

As provided in these Rules. [See Chapter IV]

(2) *Spiral Stairs*

As provided in these Rules. [See Chapter IV]

(3)*Staircase Enclosures*

(a) The external enclosing walls of the staircase shall be of the brick or the R.C.C. construction having fire resistance of not less than two hours. All enclosed staircases shall have access through self-closing door of one-hour fire resistance. These shall be single swing doors opening in the direction of the escape. The door shall be fitted with the check action door closers.

(b) The staircase enclosures on the external wall of the building shall be ventilated to the atmosphere at each landing.

(c) Permanent vent at the top equal to the 5% of the cross sectional area of the enclosure and openable sashes at each floor level with area equal to 1 to 15% of the cross sectional area of the enclosure on external shall be provided. The roof of the shaft shall be at least 1 m. above the surrounding roof. There shall be no glazing or the glass bricks in any internal closing wall of staircase. If the staircase is in the core of the

building and cannot be ventilated at each landing, a positive of 5mm e.g. by an electrically operated blower/blowers shall be maintained.

(d) The mechanism for pressurizing the staircase shaft shall be so installed that the same shall operate automatically on fire alarm system/sprinkler system and be provided with manual operation facilities.

(4)*Ramps*

As provided in these Rules. [See Chapter IV]

30. Provision of Lifts

(1) **As provided in these Rules. [See Chapter IV]**

(2) ***Lift Enclosure/lift***

General requirements shall be as follows

(a) Walls of lift enclosures shall have a fire rating of two hours.

(b) Lift shafts shall have a vent at the top of area not less than 0.2sq.m.

(c) Lift motor room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.

(d) Landing door in lift enclosures shall have a fire resistance of not less than one hour.

(e) The number of lifts in one lift bank shall not exceed four. A wall of two hours fire rating shall separate individual shafts in a bank.

(f) Lift car door shall have a fire resistance rating of one hour.

(g) For buildings 15.0m (without stilt floor) and above in height, collapsible gates shall not be permitted for lifts and solid doors with fire resistance of at least one hour shall be provided.

(h) If the lift shaft and lobby is in the core of the building a positive pressure between 25 and 30 pa shall be maintained in the lobby and a possible pressure of 50 pa shall be maintained in the lift shaft. The mechanism for the pressurization shall act automatically with the fire alarm/sprinkler system and it shall be possible to operate this mechanically also.

(i) Exit from the lift lobby, if located in the core of the building, shall be through a self-closing fire smoke check door of one-hour fire resistance.

(j) Lift shall not normally communicate with the basement. If however, lifts are in communication, the lift lobby of the basement shall be pressurized as in (g) with self-closing door as in (h).

(k) Telephone/talk back communication facilities may be provided in lift cars for communication system and lifts shall be connected to the fire control room of the building.

(l) Suitable arrangements such as providing slope in the floor of the lift lobby shall be made to prevent water used during firefighting, etc. at any landing from entering the lift shafts.

(m) A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor

showing the location of the stairways. Floor marking shall be done at each floor on the wall in front of the lift-landing door.

(n) Alternate power supply shall be provided in all the lifts.

(3) ***Fire Lift***

Following details shall apply for a fire lift in addition to above requirements:

(a) To enable fire service personnel to reach the upper floors with the minimum delay, one or more of the lifts shall be so designed so as to be available for the exclusive use of the fireman in an emergency and be directly accessible to every dwelling/lettable floor space on each floor.

(b) The lift shall have a floor area of not less than 1.4sq.m. It shall have a loading capacity of not less than 545 kg. (8 persons lift) with automatic closing doors.

(c) The electric supply shall be on a separate service from electric supply mains in a building and the cables run in a route safe from fire that is within a lift shaft. Lights and fans in the elevator having wooden paneling or sheet steel construction shall be operated on 24-volt supply.

(d) In case of failure of normal electric supply, it shall automatically switch over to the alternate supply. For apartment houses, this changeover of supply could be done through manually operated changeover switch. Alternatively, the lift should be so wired that in case of power failure, it comes down at the ground level and comes to stand still with door open.

(e) The operation of a fire lift shall by a single toggle of two-button switch situated in a glass-fronted box adjacent to the lift at the entrance level. When the switch is on landing; call points will become inoperative and the lift will be on car control only or on a priority control device. When the switch is off, the lift will return to normal working. This lift can be used by the occupants in normal times.

(f) The words 'FIRE LIFT' shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.

(g) The speed of the fire lift shall be such that it can reach to the top floor from ground level within one minute.

31. Basement

As provided in these rules. [See Chapter IV]

32. Provision of Helipad

All high-rise buildings above 60m shall have provision for a Helipad on the terrace subject to the approval of the Air Port Authority of India and Structural Safety from I.I.T/N.I.T. The same shall be approved by the Authority.

33. Service Ducts/Refuge Chute

(1) Service duct shall be enclosed by walls and door, if any, of 2 hours fire rating. If ducts are larger than 10sq.m the floor should seal them, but provide suitable opening for the pipes to pass through, with the gaps sealed.

(2) A vent opening at the top of the service shaft shall be provided between one- fourth and one-half of the area of the shaft. Refuge chutes shall have an outlet at least of wall of non-combustible material with fire resistance of not less than two hours. They shall not be located within the staircase enclosure or service shafts or air-conditioning shafts. Inspection panel and door shall be tight fitting with 1 hour fire resistance; the chutes should be as far away as possible form exits.

(3) Refuge Chutes shall not be provided in staircase walls and A/C shafts etc.

34. Electrical Services

Electrical Services shall conform to the following:

(1) The electric distribution cables/wiring shall be laid in separate ducts.

(2) The ducts shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct.

(3) Water mains, telephone cables, intercom cables, gas pipes or any other service line shall not be laid in the duct for electric cables. Use of bus ducts/solid rising mains instead of cables is preferred.

(4) The provision of dedicated telecommunication ducts for all new building proposals is mandatory for conveyance of telecommunication and other data cables.

(5) Separate conduits for water pumps, lifts, staircases and corridor lighting and blowers for pressuring system shall be directly from the main switch panel (for detailed specifications refer NBC 2005, chapter 4 Fire and Life Safety) and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others.

(6) Master switches controlling essential service circuits shall be clearly labeled.

(7) MCB and ELCB shall be provided for electrical circuit.

(8) The inspection panel doors and any other opening in the shaft shall be provided with airtight fire doors having fire resistance of not less than one hour.

(9) Medium and low voltage wiring running in shafts and within false ceiling shall run in separate metal conduits. Any 230 voltage wiring for lighting or other services, above false ceiling should have 660V grade insulation.

(10) The false ceiling including all fixtures used for its suspension shall be of non-combustible material.

(11) An independent and well-ventilated service room shall be provided on the ground floor with direct access from outside or from the corridor for the purpose of termination of electrical supply from the licenses service and alternative supply cables. The doors provided for the service room shall have fire resistance of not less than one hour.

35. Staircase and Corridor Lights

(1) The staircase and corridor lighting shall be on separate service and shall be independently connected so as it could be operated by one switch installation on the ground floor, easily accessible to firefighting staff at any time

irrespective of the position of the individual control of the light points, if any. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crisis.

(2) Staircase and corridor lighting shall also be connected to alternate supply from parallel high-tension supply or to the supply from the stand-by generator.

(3) Emergency lights shall be provided in staircase and corridor/ passageway, horizontal exits, refuge area; and all wires and other accessories used for emergency light shall have fire retardant property.

(4) Suitable arrangement shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand by supply.

36. Air-Conditioning

(1) Air-conditioning system should be installed and maintained so as to minimise the danger of spread of fire, smoke or fumes thereby from one floor of fire area to another or from outside into any occupied building or structure.

(2) Air-conditioning systems circulating air to more than one floor area should be provided with dampers designed to close automatically in case of fire and thereby prevent spread of fire or smoke. Such a system should also be provided with automatic controls to stop fans in case of fire, unless arranged to remove smoke from a fire, in which case these should be designed to remain in operation.

(3) Air-conditioning system serving large places of assembly (over one thousand persons), large departmental stores, or hostels with over 100 rooms in a single block should be provided with effective means for preventing circulation of smoke through the system in the case of fire in air filters or from other sources drawn into the system even though there is insufficient heat to actuate heat smoke sensitive devices controlling fans or dampers. Such means shall consist of approved effective smoke sensitive controls.

(4) Air-conditioning should conform to the following

(a) Escape routes like staircase, common corridors, lift lobbies; etc. should not be used as return air passage.

(b) The ducting should be constructed of metal in accordance with BIS 655:1963.

(c) Wherever the ducts pass through fire walls or floor, the opening around the ducts should be sealed with fire resisting material of same rating as of walls/floors.

(d) Where duct crosses a compartment which is fire rated, the ducts shall be fire rated for same fire rating. Further depending on services passing around the duct work, which may get affected in case of fire temperature rising, the ducts shall be insulated.

(e) Metallic ducts should be used even for the return air instead of space above the false ceiling.

(f) Where plenum is used for return air passage, ceiling and its fixtures shall be of noncombustible material.

(g) The materials used for insulating the duct system (inside or outside) shall be of noncombustible material [IS4355:1977]; glass wool shall not be wrapped or secured by any material of combustible nature and non-conductor of heat.

(h) Air ducts serving main floor areas, corridors, etc. shall not pass through the staircase enclosure.

(i) The air-handling units shall be separate for each floor and air ducts for every floor shall be separated and in no way inter-connected with the ducting of any other floor.

(j) Area more than 750sq.m on individual floor should be segregated by a firewall and automatic fire dampers for isolation should be provided.

(k) In case of buildings more than 24m in height, in non-ventilated lobbies, corridors, smoke extraction shaft should be provided.

(l) If the air-handling unit serves more than one floor, the recommendations given above shall be compiled with in addition to the conditions given below:

(i) Proper arrangements by way of automatic fire dampers working on smoke detector/or fusible link for isolating all ducting at every floor from the main riser shall be made.

(ii) When the automatic fire alarm operates, the respective air-handling units of the air-conditioning system shall automatically be switched off.

(iii) The vertical shaft for treated fresh air shall be of masonry construction.

(iv) The air filters of the air-handling units shall be of non-combustible materials or fire rated as given in the Tables 1-18 of Part IV of the NBC 2005.

(v) The air-handling unit room shall not be used for storage of any combustible materials.

(vi) Inspection panels shall be provided in the main trunking to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.

(vii) No combustible material shall be fixed nearer than 150 mm to any duct unless such duct is properly enclosed and protected with non-combustible material (glass wool or spyglass with neoprene facing enclosed and wrapped with aluminum sheeting) at least 3.2 mm thick and which would not readily conduct heat.

(5) **Fire Dampers**

(a) These shall be located in air ducts and return air ducts/passages at the following points:

(i) At the fire separation wall.

(ii) Where ducts/passages enter the central vertical shaft.

(iii) Where the ducts pass through floors.

(iv) At the inlet of supply air duct and the return air duct of each compartment on every floor.

(b) The dampers shall operate automatically and shall simultaneously switch off the air-handling fans. Manual operation facilities shall also be provided.

Note: *For blowers, where extraction system and dust accumulators are used, dampers shall be provided.*

(c) Fire/smoke dampers (for smoke extraction shafts) for building more than 24m in height.

(d) For apartment houses in non-ventilated lobbies /corridor operated by detection system and manual control sprinkler system.

(e) For other buildings on operation of smoke/ heat detection system and manual control/sprinkler system.

(f) Automatic fire dampers shall be so arranged so as to close by gravity in the direction of air movement and to remain tightly closed on operation of a fusible link.

37. Boiler Room

Provisions of boiler and boiler rooms shall conform to Indian Boiler Act, 2007. Further, the following additional aspects may be taken into account in the location of boiler/ boiler room:

(1) The boiler shall not be allowed in sub-basement, but may be allowed in the basement away from the escape routes.

(2) The boilers shall be installed in a fire resisting room of 4 hours fire resistance rating, and this room shall be situated on the periphery of the basement. Catch pits shall be provided at the low level.

(3) Entry to this room shall be provided with a composite door of 2 hours fire resistance.

(4) The boiler room shall be provided with fresh air inlets and smoke exhaust directly to the atmosphere.

(5) The furnace oil tank for the boiler, if located in the adjoining room shall be separated by fire resisting wall of 4 hour rating. Entry to this room shall be provided with a composite door of 2 hour fire resistance. A curb of suitable height shall be provided at the entrance in order to prevent the flow of oil into the boiler room in case of tank rupture.

(6) Foam inlets shall be provided on the external walls of the building near the ground level to enable the fire services to use foam in case of fire.

38. Alternate Source of Electric Supply

(1) A stand by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the standby fire pumps, pressurization fans and bowlers, P.A system, exit sign, smoke extraction system and damper system in case of failure of normal electric supply.

(2) The generator shall be capable of taking starting current of all the machines and circuits stated above simultaneously.

(3) If the standby pump is driven by diesel engine, the generator supply need not be connected to the standby pump. The generator shall be automatic in operation.

39. Safety Measures in Electric Sub-Station

(1) Clear independent approach to the sub-station from outside the building shall be made available round the clock

(2) The approaches/corridors to the sub-station area shall be kept clear for movement of men and material at all times.

(3) The sub-station space is required to be provided with proper internal lighting arrangements.

(4) In addition to natural ventilation proper ventilation to the sub-station area is to be provided by grill shutters and exhaust fans at suitable places so as to discharge all smoke from the sub-station without delay in case of fire so that sub-station operations can be carried out expeditiously.

(5) Cable trenches of 0.6m X 0.6m dummy floor of 0.6m depth shall be provided to facilitate laying of cable inside the building for connecting to the equipment.

(6) Steel shutters of 8′ X 8′ with suitable grills shall be provided for transformers and sub-station room.

(7) The floor of the sub-station should be capable of carrying 10 tons of transformer weight on wheels.

(8) Sub-station space should be clear from any water, sewer, air conditioning, and gas pipe or telephone services. No other service should pass through the substation space or the cable trenches.

(9) Proper ramp with suitable slope may be provided for loading and unloading of the equipment and proper approach will be provided.

(10) RCC pipes at suitable places as required will be provided for the cable entries to the substation space and making suitable arrangement for non-ingress of water through these pipes.

(11) The substation space is to be provided in the approved/sanctioned covered area of the building.

(12) Any other alteration/modification required while erection of the equipment will be made by the Owner/builder at site as per requirement.

(13) Adequate arrangement for fixing chain pulley block above the fixing be available for load of 15 tons.

(14) Provision shall be kept for the sumps so as to accommodate complete volume of transformer oil, which can spillover in the event of explosion of the transformer in the basement of the building. Sufficient arrangement should exist to avoid fire in the sub-station building from spread of the oil from the sumps.

(15) Arrangement should be made for the provision of fire retardant cables so as to avoid chances of spread of fire in the sub-station building.

(16) Sufficient pumping arrangement should exist for pumping the water out, in case of fire so as to ensure minimum loss to the switchgear and transformer.

(17) No combustible material should be stacked inside the substation premises or in the vicinity to avoid chances of fire.

(18) Yearly inspection shall be carried out by electrical load sanctioning Authority. It should be made mandatory that the promoters of the High Rise building should get substation premises inspected once a year to get their license revalidated for the provision of electric supply from Electricity Department so that suitable action can be taken against the Owner / Builder in case of non- implementation of Rules.

(19) The sub-station space should be totally segregated from the other areas of the basement by fire resisting wall. The ramp should have a slope of 1:10 with entry from ground level. The entire Sub-station space including the entrance at ground floor be handed over to the licensee of electricity free of cost and rent.

(20) The sub-station area shall have a clear height of 12 feet (3.65m) below beams. Further the Sub-station area will have level above the rest of basement level by 2 feet.

(21) It is to be ensured that the Sub-station area is free of seepage / leakage of water.

(22) The licensee of electricity will have the power to disconnect the supply of the building in case of violation of any of the above points.

(23) Electric sub-station enclosure must be completely segregated with 4-hours fire rating wall from remaining part of basement.

(24) The Sub-station should be located on periphery /sub-basement and (not above ground floor) and below the 1st basement.

(25) Additional exit shall be provided if travel distance from farthest corner to ramp is more than l5 m.

(26) Perfect independent vent system 30 air changes per hour linked with detection as well as automatic high velocity water spray system shall be provided.

(27) All the transformers shall be protected with high velocity water spray system / Nitrogen Injection System Carbon Dioxide total flooding system in case of oil filled transformer. In addition to this, manual control of auto high velocity spray system for individual transformers shall be located outside the building at ground floor.

(28) Suitable arrangement for pump house, water storage tanks with main electrical pump and a diesel-operated pump shall be made if no such arrangement is provided in the building. In case the water pumping facilities are existing in the building for sprinkler system, the same should however be utilized for high velocity water spray system. Alternatively automatic CO2

total flooding system shall be provided with manual controls outside the electric sub-station.

(29) System shall have facility to give an audio alarm in the basement as well as at the control room.

(30) Fire control room shall be manned round the clock.

(31) The electric sub-station shall have electric supply from alternate source for operation of vent System lighting arrangements.

(32) Cable trenches shall be filled with sand

(33) Party walls shall be provided between two transformers as per the rules.

(34) Electric control panels shall be segregated.

(35) Exits from basement electric substation shall have self-closing fire smoke check doors of 2-hours fire rating near entry to ramp.

(36) All openings to lower basement or to ground floor shall be sealed properly.

(37) Ramp to be designed in a manner that in case of fire no smoke should enter the main building.

(38) Electric sub- station transformer shall have clearance on all sides as per BBL/relevant electric rules.

(39) Other facility will be as per Building Rules and relevant electric rules.

(40) Rising electrical mains shall consist of metal bus bars suitably protected from safety point of view.

(41) Oil less transformer shall be preferred. If the sub-station is located in basement/ground floor of the main building, the transformers shall be essentially of dry type. In case of dry type transformer room with all enclosure is not essential.

Note: *The sub-station installations shall be carried out in conformity with the local fire regulations and rules there under wherever they are in force, at other places NBC guidelines shall be followed.*

40. Fire Protection Requirements

Buildings shall be planned, designed and constructed to ensure fire safety and this sha1l be done in accordance with Part IV-Fire Protection of National Building Code of India, unless otherwise specified in these Rules. In the case of Assembly Buildings, Business Buildings, Educational Buildings, Hazardous Buildings, Industrial Buildings, Institutional Buildings, Mercantile Buildings, Mixed Land use Buildings, Storage Buildings and Wholesale Establishments the building schemes shall also be cleared by the APSDR&FSD.

(1)First Aid/Fixed Fire Fighting/Fire Detection Systems and other Facilities

Provision of fire safety arrangement for different occupancy from S. No. (a) to (w) as indicated below shall be as per Part IV-Fire Protection of NBC and as recommended by the APSDR&FSD.

(a) Access

(b) Wet Riser

(c) Down Comer

(d) Hose Reel

(e) Automatic Sprinkler System

(f) Yard Hydrant

(g) UG Tank with Draw off Connection

(h) Terrace Tanks

(i) Fire Pump

(j) Terrace Pump

(k) First Aid Fire Fighting Appliances

(l) Auto Detection System

(m) Manual operated Electrical Fire Alarm System

(n) P.A System with talk back facility

(o) Emergency Light

(p) Auto D.G. Set

(q) Illuminated Exit Sign

(r) Means of Escape

(s) Compartmentation

(t) MCB /ELCB

(u) Fire Man Switch in Lift

(v) Hose Boxes with Delivery Hoses and Branch

(w) Pipes Refuge Area

(2)Note:

(a) Where more than one riser is required because of large floor area, the quantity of water and pump capacity shall be finalized in consultation with APSDR&FSD.

(b) The quantities of water shall be exclusively for firefighting and shall not be utilized for domestic or other use.

(c) A facility to boost up water pressure in the riser directly from the mobile pump shall be provided in the wet riser, down comer system with suitable fire service inlets (collecting head) with 2 to 4 numbers of 63mm inlets for 100-200mm dia main, with check valve and a gate valve.

(d) Internal diameter of rubber hose for reel shall be minimum 20mm. A shut off branch with nozzle of 5mm size shall be provided.

(e) Fire pumps shall have positive suctions. The pump house shall be adequately ventilated by using normal/mechanical means. A clear space of 1.0m shall be kept in between the pumps and enclosure for easy movement/maintenance. Proper testing facilities and control panel etc. shall be provided.

(f) Unless otherwise specified in Rules, the firefighting equipment/installation shall conform to relevant Indian Standard Specification.

(g) In case of mixed occupancy, the firefighting arrangement shall be made as per the highest class of occupancy.

(h) Requirement of water based first aid fire extinguishers shall be reduced to half if hose reel is provided in the Building.

41. Static Water Storage Tank

(1) A satisfactory supply of water exclusively for the purpose of firefighting shall always be available in the form of underground static storage tank with capacity specified by the APSDR&FSD with necessary arrangements of replenishment by town's main (if provided) or alternative source of supply @ 1000 liters per minute. The static storage water supply required for the above mentioned purpose should entirely be accessible to the fire tenders of the local fire service. Provision of suitable number of manholes shall be made available for inspection, repairs and insertion of suction hose etc. The covering slab shall be able to withstand the vehicular load of 45tonnes in case of high rise and 22tonnes in case of low rise buildings. A draw off connection shall be provided. The slab need not be strengthened if the static tank is not located in mandatory set- back area.

(2) To prevent stagnation of water in the static water tank the suction tank of the domestic water supply shall be fed only through an over flow arrangement to maintain the level therein at the minimum specified capacity.

(3) The static water storage tank shall be provided with a fire brigade collecting branching with 4 Nos. 63mm dia instantaneous male inlets arranged in a valve box with a suitable fixed pipe not less than 15 cm dia to discharge water into the tank. This arrangement is not required where down comer is provided.

42. Automatic Sprinklers

Automatic sprinkler system shall be installed in the following buildings:

(1) All buildings of 24m and above in height, except group housing and 45m and above in case of apartment /group housing building.

(2) Hotels below l5m in height and above 1000sq.m built up area at each floor and/or if basement is existing.

(3) All hotels, mercantile, and institutional buildings of 15m and above.

(4) Mercantile building having basement more than one floor but below 15m (floor area not exceeding 750sq.m).

(5) Underground Shopping Complex.

(6) Underground car / scooter parking /enclosed car parking.

(7) Basement area 200sq. m and above.

(8) Any special hazards where the APSDR&FSD considers it necessary.

(9) For buildings up to 24m in height where automatic sprinkler system is not mandatory as per these Rules, if provided with sprinkler installation following relaxation may be considered.

(a) Automatic heat/smoke detection system and M.C.P need not be insisted upon.

(b) The number of Fire Extinguishers required shall be reduced by half.

43. Fixed Carbon Di-Oxide/Foam/DCO Water Spray Extinguishing System

Fixed extinguishing installations shall be provided as per the relevant specifications in the premises where use of above extinguishing media is considered necessary by the APSDR&FSD.

44. Fire Alarm System

(1) Fire Alarm System shall be provided in residential buildings (Dwelling Houses, Group Housing, Boarding Houses and Hostels) of above 24m height (including stilt floor) and in all other buildings of above 15m (including stilt floor).

(2) All residential buildings of above 24m height (including stilt floor)shall be equipped with manually operated electrical fire alarm system with one or more call boxes located at each floor. The location of the call boxes shall be decided after taking into consideration their floor without having to travel more than 22.5m.

(3) The call boxes shall be of the break glass type without any moving parts, where the call is transmitted automatically to the control room without any other action on the part of the person operating the call boxes.

(4) All call boxes shall be wired in a closed circuit to a control panel in a control room, located as per Rules so that the floor number from where the call box is actuated is clearly indicated on the control panel. The circuit shall also include one or more batteries with a capacity of 48hours normal working at full load. The battery shall be arranged to be a continuously trickle charged from the electric mains.

(5) The call boxes shall be arranged to sound one or more sounders so as to ensure that all occupants of the floor shall be warned whenever any call box is actuated.

(6) The call boxes shall be so installed that they do not obstruct the exit ways and yet their location can easily be noticed from either direction. The base of the call box shall be at a height of 1.5m from the floor level.

(7) All buildings other than as indicated above shall, in addition to the manually operated electrical fire alarm system, be equipped with an automatic fire alarm system.

(8) Automatic detection system shall be installed in accordance with the relevant standard specifications. In buildings where automatic sprinkler

system is provided, the automatic detection system may not be insisted upon unless decided otherwise by the Fire Services Department.

Note: *Several type of fire detectors are available in the market but the application of each type is limited and has to be carefully considered in relation to the type of risk and the structural features of the building where they are to be installed.*

45. Control Room

There shall be a control room on the entrance floor of the building with communication system (suitable public address system) to all floors and facilities for receiving the message from different floors. Details of all floor plans along with the details of firefighting equipment and installation shall be maintained in the Control Room. The Control Room shall also have facility to detect the fire on any floor through indicator boards connecting fire detection and alarm system on all floors. The staff in charge of the Control Room shall be responsible for the maintenance of the various services and firefighting equipment and installation. The Control Room shall be manned round the clock by trained firefighting staff.

46. Fire Drills and Fire Orders

(1) The guidelines for fire drill and evacuation etc. for high-rise building may be seen in Appendix (B) of National Building Code Part IV. All such buildings shall prepare the fire orders duly approved by the APSDR&FSD.

(2) A qualified fire officer and trained staff shall be appointed for the following buildings.

(a) All high rise buildings above 30m in height where covered area of one floor exceeds 1000sq. m except apartments / group housing.

(b) All hotels, identified under classification of three-star and above category by Tourism Department and all hotels above 15m in height with 150 beds capacity or more without star category.

(c) All hospital buildings of 15m and above or having number of beds exceeding 100.

(d) Underground shopping complex where covered area exceeds 1000sq m.

(e) All high hazard industries.

(f) Any other risk which Fire Services Department considers necessary.

(3) The lightening protection warning light (red) for high-rise buildings shall be provided in accordance with the relevant standard. The same shall be checked by electrical department.

47. Material Used for Construction of Building

(1) The combustible/flammable material shall not be used for partitioning, wall paneling, false ceiling etc. Any material giving out toxic gases/smoke if involved in the fire shall not be used for partitioning of a floor or wall paneling or a false ceiling etc. The surface frames spread of the lining material shall conform to class-I of the standard specification. The framework of the entire false ceiling would be provided with metallic sections and no wooden framework shall be allowed for paneling/false ceiling.

(2) Construction features/elements of structures shall conform to National Building Code and BIS code.

48. LPG

The use of LPG shall not be permitted in the high-rise building except for residential/hotel/hostel/kitchen/pantry (if any) and shall be located at the periphery of the building on the ground level.

49. House Keeping

(1) A high standard of housekeeping must be insisted upon by all concerned. There must be no laxity in this respect. It must be borne in mind that fire safety is dependent to a large extent upon good housekeeping.

(2) Good House-Keeping includes the following:-

(a) Maintaining the entire premises in neat and clean condition.

(b) Ensuring that rubbish and combustible material are not thrown about or allowed to accumulate, even in small quantity, in any portion of the building. Particular attention must be paid to corners and places hidden from view.

(c) Providing metal receptacles/waste paper basket (of non-combustible material) at suitable locations for disposal of waste. Separate receptacles must be provided for disposal of cotton rags/waste, wherever it is generated, these must under no circumstances be left lying around in any portion of the building.

(d) Ensuring that receptacles for waste are emptied at regular intervals and the waste removed immediately for safe disposal outside the building.

(e) Ensuring that all doors/fixtures are maintained in good repairs, particular attention must be paid to self-closing fire smoke check doors and automatic fire/doors/rolling shutters.

(f) Ensuring that self-closing fire/smoke check doors close properly and that the doors are not wedged open.

(g) Ensuring that the entire structure of the building is maintained in good repairs.

(h) Ensuring that all electrical and mechanical service equipment are maintained in good working condition at all times.

(i) Ensuring that Cars/Scooters etc. are parked systematically in neat rows. It is advisable to mark parking lines on the ground in the parking areas near the building and in the parking area on ground floor and in basement(s); as applicable, inside the building. A parking attendant must ensure that vehicles are parked in an orderly manner and that the vehicles do not encroach upon the open space surrounding the building.

(3) Smoking Restrictions

(a) Smoking shall be prohibited throughout the basement(s) and in all areas where there is a profusion of combustible materials. Easily readable "NO SMOKING" signs must be conspicuously posted at locations where they can

catch the eye. Each sign must also include a pictograph. The sign may also be illuminated.

(b) In all places where smoking is permitted ashtrays, half filled with water, must be placed on each table/at each other suitable locations for safe disposal of spent smoking material. The design of the ashtrays must be such that they cannot easily topple over. If, for any reason, this is not practicable a minimum of one metal bucket or other non-combustible container half filled with water must be provided in each compartment for disposal of spent smoking materials.

(4)Limiting the Occupant Load in Parking and Other Areas of Basement(s)

(a) Where parking facility is provided in the basement(s) no person other than the floor-parking attendant may be allowed to enter and remain in the parking areas except for parking and removal of Cars/Scooters.

(b) Regular offices must not be maintained in the storage/parking area in the basement(s).

(c) The stores/go-downs must be opened for the limited purpose of keeping or removing stores.

(d) No person other than those on duty may be permitted in the air-conditioning plant room(s), HT/LT switch room, transformer compartment, control room pump-house, generator room, stores and records etc.

50. Fire Prevention

In addition to the measures recommended above, the following fire prevention measures must be implemented when the building is in occupation.

(1) Storage of flammable substances, such as diesel oil, gasoline, motor oils, etc. must not be allowed anywhere within the building. The only exception to this rule may be:

(a) Storage of diesel oil in a properly installed tank in a fire-resisting compartment in the generator room;

(b) Diesel oil, gasoline, motor oil etc. filled in the vehicle tanks.

(2) Preparation of tea and warming of food must be prohibited throughout the building.

(3) Where heaters are used during winters, the following precautions must be taken.

(a) All heaters, except convector heaters, must be fitted with guards.

(b) Heaters must not be placed in direct contact with or too close to any combustible material.

(c) Heaters must be kept away from curtains to ensure that the latter do not blow over the heater accidentally.

(d) Heaters must not be left unattended while they are switched on.

(e) Defective heaters must be immediately removed from service until they have been repaired and tested for satisfactory performance.

(f) Use of heaters must be prohibited in the entire basement, fire control room and in all-weather maker rooms throughout the building. Also in all places where there is profusion of combustible flammable materials.

(4) Use of candles or other naked light flame must be forbidden throughout the building, except in the offices (for sealing letters only) and kitchen. When candles/ spirit lamps are used for sealing letters/packets, extreme care must be taken to ensure that paper do not come in direct contact with the naked flame and the candle/spirit lamp does not topple over accidentally while still lighted. All candles/spirit lamps kitchen fires must be extinguished when no longer required.

(5) Fluorescent lights must not be directly above the open file racks in offices/record rooms. Where this is unavoidable, such lights must be switched on only for as long as they are needed.

(6) Filling up of old furniture and other combustible materials such as scrap paper, rags, etc. must not be permitted anywhere in the building. These must be promptly removed from the building.

(7) More than one portable electrical appliance must not be connected to any single electrical outlet.

(8) Used stencils, ink smeared combustible materials and empty ink tubes must not be allowed to accumulate in rooms/compartments where cyclostyling is done. These must be removed and disposed-off regularly.

(9) All shutters/doors of main switch panels and compartments/shafts for electrical cables must be kept locked.

(10) Aisles in record rooms and stores must have a clear uniform width of not less than 1.0m Racks must not be placed directly against the wall/partition.

(11) In record rooms, offices and stores, a clear space of not less than 30cm must be maintained between the top-most stack of stores/records and the ceiling or lighting fittings whichever is lower.

(12) A similar clearance, and at (11) above must be maintained from fire detectors.

(13) Fire detectors must not be painted under any circumstances and must also be kept free from lime/distemper.

(14) Records must not be piled or dumped on the floor.

(15) Welding or use of blow torch shall not be permitted inside the building, except when it is done under strict supervision and in full conformity with the requirements laid down in IS: 3016-1966 code of practice for fire precautions in welding and cutting operation.

(16) Printing ink/oil must not be allowed to remain on the floor; the floor must be maintained in a clean condition at all times.

51. Occupancy Restrictions

(1) The premises leased to any party shall be used strictly for the purpose for which they are leased.

(2) No dangerous trade/practices (including experimenting with dangerous chemicals) shall be carried on in the leased premises;

(3) No dangerous goods shall be stored within the leased premises.

(4) The common/public corridor shall be maintained free of obstructions, and the lessee shall not put up any fixtures that may obstruct the passage in the corridor and/or shall not keep any wares, furniture or other articles in the corridor.

(5) The penalty for contravention of the condition laid down below must be immediate termination of lease and removal of all offending materials.

(6) Regular inspection and checks must be carried out at frequent intervals to ensure compliance with conditions above.

Note: For any further details/clarification NBC Part IV shall be referred. Norms and standards in Part IV of NBC 2005 shall be overriding in any instance of variance of standards.

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CHAPTER–VII

SPECIAL REQUIREMENT FOR OCCUPANCY/LAND DEVELOPMENT AND OTHER

(General Building Requirements)

52. Category of the Building and Minimum Size of Plot

The minimum size of plots for certain categories of the building is given below:

TABLE – 13

Category wise Minimum Size of Plots

S. No.	Category	Minimum Plot Size (Sq. m)
(A)	(B)	(C)
1	Cinema Theatre / Convention Center/Game Center/ Kalyana Mandapam / Marriage hall / Social clubs and amenities	3000
2	Educational Institution	
a	Primary/Upper Primary School	2000
b	High School / Residential School	6000
c	Junior college	4000
d	Degree College	6000
e	Technical Educational Institution	10000
3	Group Development Scheme	4000
4	Hotel, Conference Hall	2000
5	LPG Storages	500
6	Multiplex Complex	3000
7	Multi storey Car Parking	1000
8	Nursing homes	300
9	Office Buildings	500
10	Petrol pumps/Filling Stations	500
11	R & D Lab	1500
12	Row Type Housing / Row Type Shopping Precincts /Cluster Housing	1000
13	‘U’ Type Commercial Building	2000
14	Others	As per required standards/as prescribed by the Competent Authority

53. Requirement of Approach Road for Building Sites/Plots

(1) The minimum abutting existing road width required for various uses of building activities shall be as given below.

TABLE – 14

Minimum Abutting Existing Road Width Required

Category		Type/Use of Building Plot permissible	Minimum abutting existing road width required (in meters)
(1)		(2)	(3)
A		**SITES IN OLD/EXISTING BUILT-UP AREAS/CONGESTED AREAS /SETTLEMENT/GRAM KHANTAM/ABADI (see Annexure)**	
	(i)	All Residential (other than Group Housing) & Commercial Buildings with maximum permissible height of 10 m. except in the plots abutting to existing 60’-0” and above wide roads.	9 *
	(ii)	For other categories the Minimum road width shall be as given in B1 Category.	
B		**SITES IN NEW AREAS/APPROVED LAYOUT AREAS**	
B 1	(i)	Basic level social amenities like Nursery School, Primary School	9 **
	(ii)	Dispensary/Diagnostic Laboratory/Poly-Clinic	
	(iii)	Non-High Rise (Residential) Buildings including Group Housing (Cellar and/or Stilt as permissible + maximum up to 5 floors),	
	(iv)	Religious Place	
B 2	(i)	Commercial Complex	12
	(ii)	Computer units/Office Building, ITES Complex	
	(iii)	Assembly Hall/Cinema Theater /Community Hall/ Function Hall/Marriage Hall	
	(iv)	General Industry/Godown	
	(v)	Group Development Scheme;	
	(vi)	Group Housing with more than 100 units,	
	(vii)	High Rise Buildings/Complexes up to height of 24 meters	
	(viii	High School/Middle School/Junior College/Tutorial	

	)	Institution	
	(xi)	Non High Rise Group Housing (Cellars as applicable + 6 floors)	
	(x)	Nursing Home/Hospital of not more than 20 beds	
	(xi)	Others not specified in the Table and all Non High-Rise buildings up to 18m height	
	(xii)	Petrol / Diesel / Gas Filling Station/LPG	
	(xiii)	Restaurant	
	(xvi)	Service establishment	
	(xv)	Workshop	
B 3	(i)	General Degree and other non-professional College	**18**
	(ii)	High-Rise buildings above 24m and up to 30m height	
	(iii)	Hospitals of more than 20 beds	
	(iv)	Multiplex Complex	
	(v)	Professional College Campus	
	(vi)	Shopping Malls (above 4000sq.m)	
	(vii)	Technical Educational Institution-Polytechnic/ITI	
B4	All High Rise Building above 30 meters will be permitted as per the Minimum Road width and setbacks as specified in Table-18.		

(2) *In case of Sites in Category-A, if a Site is abutting to a road which is less than 9m in width, a building may be permitted with a maximum height of 10m in such site, after leaving 4.5m from the Centre Line of such road for widening and the same shall be handed over to the Local Body and shall leave the prescribed setback as per Table-17 after the said road widening portion. No relaxations are permissible in such cases. **Buildings more than 10 Mts. height may be permitted in the sites abutting the existing 18 Mts. (60’-0”) wide roads subject to complying other rules. This will transform the slum character.**

(3) **In case of Sites in Category-B, if a Site is abutting to a road which is less than 9m in width, Individual Residential Building may be permitted with a maximum height of 12m, after leaving 4.5m from the Centre Line of such road for widening and the same shall be handed over to the Local Body and shall leave the prescribed setback as per Table-17 after the said road widening portion. No relaxations are permissible in such cases.

(4) In case of Notified Slums/Economically Weaker Section (EWS) Buildings, the special regulations as notified by the Government from time to time shall be followed.

(5) The sites in Old/Existing Built-up Areas/Congested Areas/Settlement/Gram Khantam/Abadi (Annexure-7) and List of Areas Prohibited for High-Rise Buildings (Annexure-8). The Government may add to or delete from the list of the said areas.

(6) In case of single plot sub-division approved by the competent authority, a means of independent access of minimum 3.6m pathway may be considered for Individual Residential Building and 6m for Non-High-Rise Group Housing Building.

54. Restrictions of Building Activity

(1) Airport

(a) Buildings

(i) For building activity within the Restricted Zone/Air Funnel Zone near the airport, necessary clearance from the concerned Airport Authority shall be obtained.

(ii) The building heights and other parameters shall be regulated as per the stipulations of the Airport Authority of India as notified in Gazette of India Extraordinary (S.O.1589) dated 30-06-2008 and as amended from time to time by Ministry of Civil Aviation, Government of India.

(iii) Irrespective of their distance from the aerodrome, even beyond 22km limit from the Aerodrome Reference Point, no radio masts or similar installation exceeding 152m in height shall be erected except with the prior clearance from Civil Aviation Authorities.

(iv) In respect of any land located within 1000m from the boundary of Military Airport no building is allowed except with prior clearance from the concerned airport authority with regard to building height permissible and safe distance to be maintained between the building and boundary of the aerodrome.

(b) Other Structures

(i) Within a 5km radius of the Aerodrome Reference Point, every structure/installation/building shall be designed so as to meet the pigeon/bird proofing requirement of the Civil Aviation Authorities. Such requirement may stipulate the prohibition of any cavity, niche or other opening on the exterior of such building / installation / structure so as to prevent the nesting and habitation of pigeon or other birds.

(ii) No chimneys or smoke producing factories shall be constructed within a radius of 8km from the Airport Reference Point.

(iii) Slaughter House, Butcheries, Meat shops and Solid Waste Disposal Sites and other areas for activities like depositing of garbage which may encourage collection of high flying birds, like eagles and hawks, shall not be permitted within 10 km from the Airport Reference Point.

(2) Defense Establishments

(a) In case of Sites within 500m distance from the boundary of Defense Areas/Military Establishments prior clearance of Defense Authority shall be obtained.

(b) In case of Naval Science and Technological Laboratory (NSTL), Visakhapatnam, no building shall be allowed with in a distance of 20m from the boundary wall of NSTL, Visakhapatnam.

(3) Electrical Lines

(a) No building or part of a building shall be constructed or re-constructed and no additions or alterations to any existing building shall be made in the intervening spaces between the building and any overhead electric supply line unless as described in Table below and specified in the Indian Electricity Rules as amended from time to time.

TABLE -15

Clearance from Overhead Electric Lines

Sl. No.	Type of Electrical Supply Line	Minimum Vertical clearance (m)	Minimum Horizontal clearance (m)
(A)	(B)	(C)	(D)
1	Low and Medium Voltage lines and service lines	2.5	1.2
2	High Voltage lines up to and including 11000 volts	3.7	1.2
3	High Voltage lines above 11000V and up to including 33000 volts	3.7	2.0
4	Extra High Voltage lines above 33000 volts	3.70 plus 0.30m for every additional 33000 volts or part thereof	2.00 plus 0.30m for every additional 33000 volts or part thereof

(b) In case of Electricity Tower lines, the land all along below the tower line shall be developed as green belt to an extent of the width of tower base and on either side of green belt there shall be a minimum of 10m wide roads or as defined in the Master Plan.

(4) Environmental Impact Assessment Notification-2006

As per the provisions laid under the EIA Notification S.O.1533, Dt.14.9.2006 and it's amendment dt.01.12.2009 issued by MOE&F, GOI and Notifications issued from time to time with reference to "Building / Construction Projects/Area Development Projects and Townships" complying with the following threshold limits fall under category B and are required to obtain prior Environmental Clearance (EC) from State Environmental Impact

Assessment Authority (SEIAA), Ministry of Environment and Forests, Government of India.

TABLE -16
Building/Construction Projects/Area Development Projects and Townships

Project / Activity		B Category with threshold limit	Conditions, if any
(A)		(B)	(C)
8(a)	Buildings and Construction Projects	≥20000sq.m and <1,50,000sq.m of built up area#	#(Built up area for covered construction; in case of facilities open to the sky, it will be the activity area
8(b)	Townships and Area Development Projects	Covering an area ≥ 50ha and or built up area ≥1,50,000sq.m ++	++All Projects under Item8(b) shall be appraised as Category B1

(5) Heritage Structures / Geo Heritage Sites

(a) In case of Sites located within the distance up to 100m from protected monuments as notified under Archeological Monuments and Ancient Sites and Remains Act 1955 and as amended no construction is allowed.
(b) For the Sites located within distance of above 100m and up to 200m from the protected monuments, the construction is allowed only after obtaining prior permission from the National Monument Authority.
(c)For the Sites located within the vicinity of any Heritage Structure / Geo Heritage Sites notified as per the respective law, the prior clearance from the concerned authority shall be obtained.
(d) For the development/redevelopment of any notified Heritage Structure/ Geo Heritage Sites the stipulations as prescribed by the respective authority shall be followed.

(6) Oil / Gas Pipelines

In case of Sites in the vicinity of Oil/Gas pipelines, clearance distance and other stipulations of the Respective Authority shall be complied with. The Oil/Gas Authorities shall also specify the clearances required stretch wise to Local Body.

(7) Railways

The distance between the Railway Property Boundary and the edge of the building shall be 30m as per Indian Railways Works Manual or as per No Objection Certificate (NOC) given by the Railway Authorities.

(8) Religious Structures

(a) In case of Sites located within a radius of 100m from the notified religious structure from time to time by the sanctioning authority, the construction is allowed up to 12m height only.

(b) For the Sites located within a radius of above 100m and up to 300m from the notified religious structure as notified from time to time, only non-high rise structures are allowed.

(9) Site and Land Use Pattern

Notwithstanding anything contained in these Rules, no building permit on any site shall be sanctioned if:

(a) the proposed land use does not correspond to the land use in the Development Plan/Master Plan/Layout Plan or any draft/sanctioned plan for the area or the zoning regulations.

(b) the use of building or place will be a source of annoyance to, or injurious to the health of the inhabitants of the neighbourhood.

(c)the construction of any building is for public worship, which in the opinion of the Sanctioning Authority will affect the religious feelings of any class or persons in the vicinity thereof.

(d) there is deposited refuse, excreta or other offensive matter, which is considered objectionable, until such refuse, excreta or other offensive matter has been removed there from and the plot has been prepared or left in a manner suitable for land development, redevelopment or building purpose.

(e) it comprises or includes a pit, quarry or other similar excavation or any part thereof unless such plot has been prepared or left in a manner or condition suitable for land development or redevelopment or building purposes.

(f) it is liable to flood or on a slope forming an angle of more than 45 degrees with the horizontal or on soil unsuitable for percolation or on area shown as floodable area in any plan/scheme or in sandy beds, unless it is proved by the owner that construction of such a building will not be dangerous or injurious to health and the site will not be subjected to flooding or erosion, or cause undue expenditure of public funds in the provision of roads, sewers, sanitation, water supply or other public services.

(g) it is for any land development or redevelopment of land or construction in any area notified by Government of India as Coastal Regulation Zone under the Environment (Protection) Act, 1986 (29 of 1986) and Rules made there under and it shall be subject to the restrictions that may be imposed by Government of India contained in the said notification as amended from time to time.

(h) it is in areas of natural waterways or drains and if the building is to be constructed over or under a municipal drain, sewerage line, electrical line, water main, any other government or public land, or public utility services;

(i) the required permission/No Objection Certificates of any other Departments/Agencies as required under law has not been obtained for any land developments and constructions.

(10) Vicinity of important buildings

No private building exceeding 10m height shall be permitted within 200m radius from the boundary of the Governor's House, State Secretariat, Legislative Assembly, Official Residences of Chief Justice of High Court, Chief Minister, Heads of Legislature and such other buildings as may be notified by the ULB/Government from time to time.

(11) Water Bodies

(a) No building / development activity shall be allowed in the bed of water bodies like river or nala and in the Full Tank Level (FTL) of any lake, pond, cheruvu or kunta / shikam lands.

Unless and otherwise stated, the area and the Full Tank Level (FTL) of a Lake / Kunta shall be reckoned as measured and as certified by the Irrigation Department and Revenue Department.

(b) The above water bodies and courses shall be maintained as Recreational/Green Buffer Zone and no building activity shall be carried out within:

(i) 100m from the boundary of the River outside the limits of Local Authorities and 50m within the limits of the Local Authorities. The boundary of the river shall be as fixed and certified by the Irrigation Department and Revenue Department.

(ii) 30m from the FTL boundary of Lakes / Tanks / Kuntas of area 10Ha and above.

(iii) 9m from the FTL boundary of Lakes / Tanks / Kuntas of area less than 10Ha / shikam lands;

(iv) 9m from the defined boundary of Canal, Vagu, Nala, Storm Water Drain of width more than 10m.

(v) 2m from the defined boundary of Canal, Vagu, Nala, Storm Water Drain of width up to 10m.

(c)Unless and otherwise specified in the Master Plan/Zonal Development Plan.

(i) In case of (b) (i) & (ii) above, the buffer zone may be utilised for road of minimum 12m width, wherever feasible.

(ii) In case of (b) (ii) above, in addition to development of recreational / green belt along the foreshores, a ring road or promenade of minimum 12m may be developed, wherever feasible 3.6m walking / cycle track within the 30m buffer strip may be provided.

(iii) The above buffer zone to be left may be reckoned as part of tot lot or organized open space and not for setback requirements.

(d) In case of areas along the sea coast, the Coastal Regulation Zone Regulations shall be followed.

(12) Swimming Pool:

(a) *Definition:* A pool or a tank indoor or outside the building, used for the purpose of swimming, bathing, aquatic sports or games, training, treatment (Therapy) or recreation, meant exclusively for human being, having a depth of water not less than that 60cm and the surface area exceeding 23.25sq. m both for the use of public or the institution concerned.

(b) Swimming Pool may be permitted on ground or on the terrace of the building subject to submission of Structural Designs and Structural Stability Certificate issued by the Licensed Structural Engineer along with the Building Application. This shall not be constructed in the tot-lot or organized open space area meant for mandatory requirement for such purpose as per these rules.

(c) The applicant shall submit an Undertaking along with the Building Application that necessary safety measures are undertaken regarding construction and also the safety of the users.

(d) The following guidelines shall be followed:

(i) *"Capacity of Pools in Relation to Bathers":* The maximum number of persons in bathing attire within the pool enclosures of the bathing area shall not exceed one person per 1.86sq. m (20sq. ft.) of pool i.e. the area of the water surface.

(ii) *"Hand Rail":* A side handrail extending up above and returning to the horizontal surface of the pool deck curb or coping shall be provided at each side of each ladder.

(iii) *"Depth Markers":* Depth of water shall be clearly marked at or above the water surface on the vertical pool wall and on the edge of the deck or walk-way next to the pool, at maximum points and at the points of break between the deep and shallow portions and at intermediate increments of depth, spaced at not more than 7.62cm (2'.5") intervals. Depth markers, contrasting with background shall be on both sides of the pool.

(iv) *"Lighting and Wiring":* Where submarine lightning is used, not less than 0.5 watts shall be employed per sq. ft. of pool area.

(v) *"Area Lightning":* Where submarine lightning is employed, area lightning shall be provided for the deck areas and directed towards the deck areas and away from the pool surface so far as practicable, in a total capacity of not less than 0.6 watt per sq. ft of deck area. Where submarine lighting is not provided and night swimming is not permitted combined pool lightning shall be provided in an amount of not less than 2 watts per sq. ft. of total area. All submarine lightning shall be individually earthed and must be water tight and damp proof.

(vi) *"Over Head Wiring":* No electrical wiring for electrical or power shall be permitted to pass over within 6m (20feet) of the pool enclosure.

(vii) *"Shallow Minimum Depth":* Every swimming pool shall have a minimum depth in the shallow area of the main swimming area of not less than 0.9m (3feet), but not more than 1.07m (3'-6") from the overflow level to the floor.

(viii) *"Shallow Areas":* In a swimming pool with a diving area, the shallow area of the pool shall be defined as the portion between the shallow end and the break point between the shallow area and the diving area. The slope of the floor shall be uniform from the break point between the diving area and the shallow portion to the outside edge of the shallow portion and shall not be greater than 1 in 2m.

(ix) *"Vertical Wall Depth":* The pool walls shall be vertical at all points for a depth of not less than 0. 76m (2'. 6".)

55. Special requirements for Occupancy/Land Development

NOTE: The relevant provisions, standards contained in these Rules and also as given in the NBC shall apply to the following type of occupancy/development in addition to requirements mentioned specifically below depending on the type proposal.

(1) Assembly buildings (Cinema, Theatres, etc.)

(a) The relevant provisions of the Andhra Pradesh Cinemas (Regulation) Act, 1955 and Andhra Pradesh Cinema (Regulation) Rules 1970 and the Provisions for Construction and Regulation of Multiplex Complexes as given in these Rules and the IS: 4878 code or any other relevant code of National Building Code shall apply for planning, design and construction of Cinema Building.

(b) Parking spaces wherever not specifically given shall conform to provisions as mentioned in these Rules.

(c) **Requirements of Water Supply, Drainage and Sanitation** shall conform to provisions as given in the Annexure to these Rules.

(2) Educational buildings (schools/colleges)

(a) No basement or cellar room shall be designed, constructed, altered, converted or used for the purpose of study or instruction.

(b) Every building exceeding two storeys in height shall be constructed of fire resisting material throughout.

(c) The minimum size of a study room or room used for purposes of instruction shall be 5.5m x 4.5m and no part of such room shall be distant more than 7.5m from an external wall abutting on the requisite open space. Every such room shall have minimum ventilation to the extent of 1/5th of its floor area.

(d) A minimum of 1.0sq m. of net floor space per student shall be provided. A central hall will not be counted in the accommodation, nor will a class room for cookery, laundry, manual instruction, drawing or science. The number of students in such building shall be calculated on this basis for the purpose of this clause.

(e) Every assembly room, gymnasium shall have a clear height of 3.6m except under a girder which may project 0.6m below the required ceiling height. A clear internal height under balcony or a girder shall not be less than 3.0m. A minimum room height for classroom in all schools and other institutions shall not be less than 3.0m. The minimum head room under beams shall be 2.75m.

(f) Exit requirements shall conform to as mentioned in these Rules. No door shall be less than 1.2m in width and 2.20m in height.

(g) **Requirements of Water Supply, Drainage and Sanitation** shall conform to provisions as given in the Annexure to these Rules.

(h) Prior permission shall be obtained from the Education Department before applying for the Building Permission.

(i) Playground shall be provided as per norms prescribed by the concerned Education Department.

(3) Farm Shed

(a) Shed should be constructed on pillars with walls on two longer sides not higher than 1.2m.
(b) The remaining height of the farm sheds in respect of two longer sidewalls can be covered with netting or other similar material.
(c) The maximum height of the roof of the farm shed shall not exceed 6.0m.
(d) There should be a minimum distance of 6.0m between sheds in the farm.
(e) The minimum distance of any farm building from the property line should be 4.5 m.
(f) The minimum distance of any farm shed or farm building from the dwelling unit should be 7.5 m.

(4) Dwelling Units as a Farm House

(a) The maximum coverage for the dwelling unit shall be as per the provision of the Master Plan / Zonal Plan.
(b) The requirements of parts of dwelling shall be as provided in these rules.
(c) Any other special requirements as specified by the Authority.

(5) Industrial buildings (factories, workshops, etc.)

(a) The relevant provisions contained in the Factory Act, 1948 shall apply for the construction of factory buildings. The minimum internal height of workrooms shall not be less than 3m with subject to height of the ground floor being not less than 3.6m (both being clear height under the structural members) provided that this bye-law shall not apply to room intended for storage, go-downs and the like purposes but only in rooms occupied by workers for purposes of manufacture. In case of small factories, for purposes of manufacturing and carrying manufacturing covered under the flatted factories and service industries as per Master Plan/Zonal Plan, the Authority may allow minimum height up to 3.66m (all the above shall be in conjunction with Chief Inspector of Factories of Andhra Pradesh and Andhra Pradesh Disasters Response and Fire Services Department norms).

(b) **Requirements of Water Supply, Drainage and Sanitation** shall conform to provisions as given in the Annexure to these Rules but in no case less than one W.C. and one urinal shall be permitted.

(c) Notwithstanding the provision of exits requirements, each working room shall be provided with adequate number of exits not less than two in number.

(d) No exit shall be less than 1.2m in width and 2.1m in height and doors of such exit shall be so arranged that it can be opened easily from inside.

(e) No staircase, lobby corridors or passage shall be less than 1.2m in width.

(f) There shall be provided at all time for each person employed in any room of factory at least 3.5sq m of floor space exclusive to that occupied by the machinery and a breathing space of at least 15 cum. (Further the provision

of Part VIII Section 1 Lighting and Ventilation of National Building code of India with amendments time to time) shall be followed.

(g) The effluents from industries (industrial and biological in nature) shall be treated and shall be of quality to the satisfaction of the concerned local bodies before letting out the same into a watercourse or municipal drain.

(6) Poultry farms (wherever allowed as per Master Plan)

(a) The coverage for poultry farms shall be as allowed in case of farmhouses.

(b) Setback: The setback for farm building from the right of way shall be as under:

Road Width & Front Setback for Poultry Farms

S. No.	Road width (m)	Front Setback (m)
(A)	(B)	(C)
1	90	60
2	60	37
3	30	22
4	18	13

(7) Provision for conservation of Heritage Sites including Heritage Buildings, Heritage Precincts and natural feature areas:

The building regulations for above are given in CHAPTER-IX-1.

(8) Provisions in the public buildings for Differently-Abled Persons, Elderly and Children:

The buildings to be designed for Differently-Abled Persons, Elderly and Children need special treatment and the provisions for site planning, building requirements etc. are given in CHAPTER-IX-2.

(9) Special buildings not covered

In case of special buildings not covered above, norms will be followed as decided by the Authority.

(10) Rules for Development of land

The provisions of Master Plan/Development Plan and norms formulated by Authority shall apply regarding sub-division of a large parcel of land into plots, open areas, roads, spaces for services and community facilities.

56. Compliance with Andhra Pradesh Energy Conservation Building Code (APECBC) (see Annexure):

(1) 'Energy Conservation Building Code' or 'ECBC' is the energy code adopted by the Bureau of Energy Efficiency in 2007 and revised in 2008, that provides the minimum requirements for energy-efficient building design and

construction. The Energy Conservation Building Code (2008) when locally adapted to Andhra Pradesh's climate is termed as the "Andhra Pradesh Energy Conservation Building Code (APECBC)." All definitions included in the Energy Conservation Building Code (2008) and not otherwise defined herein are applicable to the Andhra Pradesh Energy Conservation Building Code." **Accordingly the Government of Andhra Pradesh while adopting the Energy Conservation Building Code (ECBC) amended the Andhra Pradesh Building Rules, 2012 and issued the notification in G. O. Ms. No. 30 Dated: 28.01.2014 as given in the Annexure.**

(2) The code shall be applicable to commercial buildings and other Non-Residential Buildings that have a plot area of more than 1000 Square Meters or built up area of 2000 Square Meters and certain categories of buildings such as multiplexes, Hospitals, Hotels, and Convention Centers irrespective of their built up area shall comply with the APECB Code.

(3) The code is mandatory for all new buildings, as stated above, to comply with AP* (AP ONE STAR) with prescriptive/whole building performance method of compliance for the buildings. The prescriptive method format is given in Appendix G of APECBC, as given Annexure. The whole building performance method is given in Appendix B of APEC BC, as given in Annexure.

(4) At the time of plan approval, the Owner and Builder/developer shall submit the AP* (AP ONE STAR) compliance, sealed and signed by AP Empanelled Architect with MAUD and NREDCAP or Bureau of Energy Efficiency Empanelled Architect against the mandatory requirement of compliance of APECBC to respective Urban Local Body. The details of compliance documentation, administration and energy analysis is given in the APEC BC in chapter 3 as given Annexure.

(5) At the time of issuance of occupancy certificate, the builder/owner/developer shall submit the professional statement by AP Empanelled Architect with MAUD and NREDCAP / BEE Empanelled Architect verifying that the building has been built in accordance with the approved design and plan approval. Once the professional statement is submitted along with any other necessary requirements as per the Building Rules, the occupancy certificate will be issued.

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CHAPTER - VIII

DEVELOPMENT CODES

(Provisions for Non-High Rise Development)

57. Permissible Setbacks & Height for All Types of Non-High Rise Buildings

(1) The height of buildings permissible in a given site/plot shall be subject to restrictions in the areas notified as **(a) Sites in Old /Existing Built up areas/Congested areas/Settlement/Gram Khantam and (b) Areas Prohibited for High Rise Buildings** given in the Annexures.

(2) The minimum setbacks and permissible height as per **Table – 17** and other conditions stipulated below shall be followed.

TABLE – 17
Minimum Setbacks and Height Permissible

Sl. No.	Plot Size (in Sqm) Above – Up to	Parking provision	Height (in m) Permissi-ble Up to	Building Line or Minimum Front Setback to be left (in m) — Abutting Road Width					Minimum setbacks on remaining sides (in m)
				Up to 12 m	Above 12m & up to 18m	Above 18m & up to 24 m	Above 24m & up to 30m	Above 30m	
(A)	**(B)**	**(C)**	**(D)**	**(E)**	**(F)**	**(G)**	**(H)**	**(I)**	**(J)**
1	Less than 50		**7**	1.5	1.5	3	3	3	**-**
2	50-100	-	**7**	1.5	1.5	3	3	3	**-**
			10	1.5	1.5	3	3	3	**0.5**
3	100 - 200	Stilt floor	**10**	1.5	1.5	3	3	3	**1.0**
4	200 - 300	Stilt floor	**7**	2	3	3	4	5	**1.0**
			10	2	3	3	5	6	**1.5**
5	300 - 400	Stilt floor	**7**	3	4	5	6	7.5	**1.5**
			12	3	4	5	6	7.5	**2.0**
6	400 - 500	Stilt floor	**7**	3	4	5	6	7.5	**2.0**
			12	3	4	5	6	7.5	**2.5**
7	* 500 - 750	Stilt floor	**7**	3	4	5	6	7.5	**2.5**
			12	3	4	5	6	7.5	**3.0**
			15	3	4	5	6	7.5	**3.5**
8	750 - 1000	Stilt + One Cellar floor	**7**	3	4	5	6	7.5	**3.0**
			12	3	4	5	6	7.5	**3.5**
			15	3	4	5	6	7.5	**4.0**
9	1000 - 1500	Stilt + 2 Cellar	**7**	3	4	5	6	7.5	**3.5**
			12	3	4	5	6	7.5	**4.0**
			15	3	4	5	6	7.5	**5.0**

		floors	**18****	3	4	5	6	7.5	**6.0**
10	1500 - 2500	Stilt + 2 Cellar floors	**7**	3	4	5	6	7.5	**4.0**
			15	3	4	5	6	7.5	**5.0**
			18**	3	4	5	6	7.5	**6.0**
11	Above 2500	Stilt + 2 or more Cellar floors	**7**	3	4	5	6	7.5	**5.0**
			15	3	4	5	6	7.5	**6.0**
			18**	3	4	5	6	7.5	**7.0**

(3) Stilt Floor meant for parking is excluded from the permissible height in the above Table. Height of stilt floor shall not be less than 2.5m. In case of parking floors where mechanical system and lift are provided, height of such parking floor shall not be less than 4.5m. Parking floors in High rise buildings are also excluded from calculation of height of building.

(4) *In case of commercial buildings proposed in plots having an extent of 500-750sq.m, cellar floor for parking may be considered subject to fulfilment of the required Parking space Requirements for the proposed building as given in these Rules.

(5) **Buildings of height above 15m and below 18m in Sl.Nos.9, 10 and 11 above, shall be permitted only if such plots abut minimum 12m wide roads only.

(6) Other conditions:

(a) The setbacks are to be left after leaving the affected area of the plot/site, if any, for road widening.

(b) Where a site abuts more than one road, then the front setback should be insisted towards the bigger road width and for the remaining side or sides, the setback as at Column- (J) shall be insisted.

(c) A strip of at least 1m greenery/lawn along the frontage of the site within the front setback shall be developed and maintained with greenery.

(d) For Plots above 300sq.m in addition to (c) above, a minimum 1m wide continuous green planting strip in the periphery on remaining sides are required to be developed and maintained within the setback.

(e) For all residential/institutional/industrial plots above 750sq.m, in addition to (c) and (d) above, 5% of the site area to be developed as organized open space and be utilized as greenery, tot lot or soft landscaping etc., and shall be provided over and above the mandatory setbacks. Such organized open space could be in more than one location and shall be of a minimum width of 3m with a minimum area of 15sq.m at each location.

(f) If the strip of greenery/lawn and the organized open space (tot lot) are not maintained, 10% of additional Property Tax every year shall be imposed as penalty by the Sanctioning Authority till the condition is fulfilled.

(g) In all plots 750sq.m and above, provision shall be made for earmarking an area of 3m X 3m for the purpose of setting of public utilities like

distribution transformer, etc. within the owner's site subject to mandated public safety requirements.

(h) In case of plots 300 - 750sq.m, it is permitted to transfer up to 1m of setback from any one side to any other side without exceeding overall permissible plinth area. The transfer of setback from front setback is not allowed.

(i) In case of plots above 750sq.m, it is permitted to transfer up to 2m of setback from any one side to any other side without exceeding overall permissible plinth area, subject to maintaining of a minimum 2.5m setback on other side and a minimum building line. The transfer of setback from front setback is not allowed.

(j) For narrow plots having extent not more than 400sq.m and where the length is 4 times of the width of the plot, the setbacks on sides may be compensated in front and rear setbacks so as to ensure that the overall aggregate setbacks are maintained in the site, subject to maintaining a minimum of side setback of 1m in case of buildings of height up to 10m and minimum of 2m in case of buildings of height above 10m and up to 15m without exceeding overall permissible plinth area. (This Rule shall not be applicable for made-up plots).

(k) The space between 2 blocks shall not be less than the minimum side setback of the tallest block as mentioned in Table–17 and this shall not be considered for organised open space (tot lot).

(l) Where all the owners of sites along an abutting road come forward for widening of the road by undertaking preparation of a Road Development Plan which would improve circulation in the area and duly approved by the competent authority, and by leaving the area affected in the widening of such road free of cost and implement it within one year, then higher height of the corresponding widened road width would be considered for such sites.

(m) Stepped type buildings or incremental type buildings may be allowed only in respect of individual residential or educational/institutional buildings and such incremental development would be considered only after a minimum time period of 5 years.

(7) Compliance of National Building Code Provisions for Amenities and Facilities in all Non High Rise Buildings:

(a) The building requirements and standards other than heights and setbacks specified in the National Building Code - 2005 shall be complied with.

(b) Such buildings shall be undertaken by owners by engaging registered architect, licensed builders / developers and licensed structural engineers. The designs and building plans shall be countersigned by the owner, licensed developer, registered architect, licensed engineer and a qualified & licensed Structural Engineer who shall be responsible for the supervision, structural safety, fire safety and specifications compliance of such buildings.

(c) The work of the building services like sanitation, plumbing, fire safety requirements, lifts, electrical installations, and other utility services shall

be executed under the planning, design and supervision of qualified and competent technical personnel.

(d) The parking requirements shall comply as given in these rules. The parking facilities and vehicles driveways etc. shall be maintained to the satisfaction of the Sanctioning Authority.

(e) All Public and Semi-Public Buildings and Institutional Buildings shall be designed and constructed to provide facilities to the Differently Abled Persons, Elderly and Children as given in these Rules and as prescribed in the National Building Code of India.

(f) In all Buildings, the requirements of parts of the building like size and area requirements of habitable rooms, kitchen, bathrooms and Water closets, other areas, corridor and staircase widths, service ducts, etc. shall conform to these Rules given separately and also as per National Building Code of India.

(g) Rain Water Harvesting Structures shall be provided as given in these Rules.

(h) Provisions of the Andhra Pradesh Water, Land and Trees Act, 2002 shall be complied in such sites and schemes where ever applicable.

(i) Buildings shall be designed for compliance with earth quake resistance and resisting other natural hazards. The Completion Certificate shall mention that the norms have been followed in the design and construction of buildings for making the buildings resistant to earthquake, compliance with structural safety and fire safety requirements.

(j) In case of Group Housing Buildings where there are 100 units and above, a minimum 3% of built up space or 50,000 sft which ever is lesser shall be planned and developed for common amenities and facilities like convenient shopping, committee hall / club house, crèche, gymnasium etc. as per National Building Code of India (NBC)-2005. Amenities block shall not be part of the residential blocks. However in case of single apartment block, amenities can be provided in the same block.

(k) In case of sites more than 1000 sq.mts. for Residential Buildings and buildings proposed for Nursing Homes, Hospitals and Hotels provision for Solar Water Heating System and Solar Lighting System shall be provided and the compliance of the same shall be confirmed before issuing occupancy certificate.

(l) In case of sites more than 1000 sq.mts. and above for Residential, Nursing Homes, Hospitals and Hotels provision for Recycling of Water shall be made and the compliance of the same shall be confirmed before issuing occupancy certificate.

(m) Baby Feeding Room / facility shall be provided in Shopping Malls, Public Buildings and Organizations/Establishments/Institutions where more than 15 women are employed.

58. Row Type Housing / Row Type Shopping Precincts

(1) Row Houses shall abut internal roads only.

(2) Minimum site area shall be not less than 1000sq.m.

(3) Minimum size of individual plot shall be 50sq.m.

(4) Maximum plot size shall be 125sq.m.

(5) Number of plots in a row shall not be more than 8.

(6) Separation between two blocks shall not be less than 6 m which may be an open space or an alley/pedestrian plaza.

(7) Only internal staircase is allowed.

(8) Minimum width of internal roads: 9m.

(9) Internal cul-de-sac road 6m with maximum length 50m is allowed.

(10) Minimum open space**:** 10 % of site area.

(11) Height permissible**:**

(12) Ground + 1 floor or 7m in plot area up to 100sq.m.

(13) Ground + 2 floors or 10m in plot area of above 100sq.m.

(14) Minimum setbacks: Front 3m; Rear 1.5m.

(15) The setbacks in a row can be interchangeable.

(16) In case of row type shopping precincts, back to back shops with above front setback of 3m would be allowed.

(17) In case of very large projects more than 5 acres, common amenities and facilities like shopping center, community hall/club house etc. are required to be provided in minimum 5 % of the site area.

(18) In case of Row Type Shopping Precincts, common basement parking in one or more levels would be permissible subject to fulfilling the Parking Requirements under these Rules.

59. Cluster Housing

(1) Minimum site area shall be not less than 1000sq.m.

(2) Minimum Plot size 25sq.m with maximum number of 20 houses in a cluster.

(3) Minimum size of cluster open space 36sq.m with a minimum width of 6m.

(4) Height permissible 2 floors or 6m.

(5) Minimum access road 9m.

(6) Internal access may be through pedestrian paths of 6m.

(7) Minimum space between two clusters shall be 6m which may be utilised as pathway / alley.

(8) Building setbacks: No setbacks are needed for interior clusters as the lighting and ventilation is either from the central open space of cluster and the surrounding pedestrian pathway / access road of the cluster. However, interior courtyards may be provided for larger plots and building areas to facilitate lighting and ventilation. For end clusters sides that are abutting peripheral thoroughfare roads or property boundary, setback / building line shall be as per Table – 17.

(9) In case of very large projects more than 5 acres, common amenities and facilities like shopping center, community hall/club house etc. are required to be provided in minimum 5 % of the site area.

60. Buildings with Central Courtyard for Commercial Use

(1) ‘U’ type commercial buildings with central courtyard are allowed with a minimum plot area of 2000sq.m with the following conditions:

(2) The Front setback shall be as per Table-17 & Table-18 for Non High Rise & High Rise buildings respectively.

(3) The minimum open space / setback on sides and rear except front, shall be

(a) 2m for building height up to 15m;

(b) 3m for building height up to 18m;

(c) 7m in case of high rise buildings up to 30m height and buildings coming under purview of Andhra Pradesh Fire Service Act-1999.

(4) The area so saved is transferred to the central area / space or court yard;

(5) The depth of such courtyard shall be at least 50% of the average building depth and the minimum width shall be 10m.

61. Group Development Schemes

(1) The minimum site/plot area shall be 4000sq.m.

(2) The minimum abutting existing road width shall be 12m and black topped.

(3) If the site is not abutting to an existing road, the proposals should be promoted with the immediate improvement of the accessibility of the site from the nearest main road by way of an approved Road Development Plan by the Competent Authority with a minimum width of 12m which should be implemented by the Licensed Developer within a period of three years.

(4) Group Development Schemes shall be considered where the site is developed together with construction of building and all amenities and facilities and not disposed as open plots.

(5) All such applications shall in addition to the requirements under these Rules be accompanied by the following provisional plans.

(i) A Services and Utilities Plan as per standards for water supply system, drainage and storm water disposal system, sewerage system, rain water harvesting structures, and for other utilities.

(ii) A Landscaping plan including rain water harvesting / water recycling details.

(iii) Parking & Internal Circulation Plan along with common pool parking area plan, if any.

(6) The above shall be drawn to suitable scale with relevant details.

(7) Minimum of 10% of site area shall be earmarked for organized open space and be utilized as greenery and shall be provided over and above the mandatory setbacks at suitable location accessible to entire community to the satisfaction of the competent authority. Such open space shall be open to sky and shall not be over cellar floors.

(8) No additional or proportionate open space charges need to be levied in such schemes.

(9) These shall not be applicable in case of Government sponsored Housing Scheme/approved Non-Government Organizations (NGOs) or private schemes, and the guidelines and requirements as given in the National Building Code for Low Cost Housing / Government orders shall be followed.

(10) The Building setbacks shall be as per the type of housing & requirements given above for the said type of housing and as per Table - 17 and Table – 18.

(11) The open space to be left between two blocks also shall be equivalent to the setback mentioned in Column – (J) of Table-17 and Column – (E) of Table-18 for Non High Rise & High Rise buildings respectively.

(12) A thorough public access road of 12m width with 2-lane black-topped is to be developed within the applicant's site on any one side at the periphery / as per suitability and feasibility for the convenience of accessibility to improve the circulation pattern in the locality to satisfaction of the competent authority. This condition would not apply if there is an existing abutting peripheral road on any side.

(13) Road requirements:

(a) 9m to 18m for main internal approach roads;

(b) 9m for other internal roads and also for looped roads.

(c)8m for cul-de-sacs roads (with a minimum radius 9m.) between 50-100m length.

(14) All roads and open spaces mentioned in this Rule shall be handed over to local body at free of cost through a registered gift deed before issue of occupancy certificate. The society / association may in turn enter into agreement with the local authority for utilizing, managing and maintaining the roads and open spaces. In case of any violation or encroachment, the local authority shall summarily demolish the encroachments and resume back the roads and open spaces and keep it under its custody.

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CHAPTER - IX

PROVISIONS FOR HIGH RISE DEVELOPMENT

62. High Rise Buildings/Complexes

(1) High Rise Building means a building with 18m or more in height.

(2) Chimneys, cooling towers, boiler rooms, lift machine rooms, cold storage and other non-working areas in case of industrial buildings and water tanks and architectural features in respect of other buildings are excluded in including the height.

Note: *High Rise Buildings shall conform to these provisions in addition to the Rules specifically given in* ***CHAPTER-III [Procedural Requirement], CHAPTER-IV [General Space Requirements and Services], CHAPTER-V [Provisions for Structural Safety of Buildings] CHAPTER-VI [Fire Protection and Fire Safety Requirements] and CHAPTER-VII [General Building Requirements] and also those given in other Chapters.***

63. Application

(1) Every application to construct or reconstruct a high rise building or alteration to existing high rise building shall be made in the prescribed form and accompanied by detailed plans, floor plans of all specifications duly certified by a qualified licensed structural engineer.

(2) Such buildings shall be undertaken by owners by engaging registered architect, licensed builders/developers and licensed structural engineers. The designs and building plans shall be countersigned by the owner, licensed developer, registered architect, licensed engineer and a qualified & licensed Structural Engineer who shall be responsible for the supervision, structural safety, fire safety and specifications compliance of such buildings.

(3) The work of the building services like sanitation, plumbing, fire safety requirements, lifts, electrical installations, and other utility services shall be executed under the planning, design and supervision of qualified and competent technical personnel.

(4) Prior Clearance from Airport Authority

For any High Rise Building located in the vicinity of airports as given in the National Building Code, the maximum height of such building shall be decided in consultation with the Airport Authority and shall be regulated by their rules/requirements.

(5) Prior No Objection Certificate (NOC) from the Andhra Pradesh State Disaster Response & Fire Services Department [APSDR&FSD]

For all High Rise Buildings prior No Objection Certificate (NOC) from the Andhra Pradesh State Disasters Response & Fire Services Department shall be obtained and copy of the approved plan and No Objection Certificate

(NOC) issued by the said department shall be enclosed along with the building application.

(6) The facilities for providing fire protection and firefighting facilities in such buildings should be in compliance with the stipulations laid down and clearance issued by the Andhra Pradesh State Disaster Response & Fire Services Department as required under Andhra Pradesh Fire Service Act, 1999)/National Building Code of India (NBC)-2005 from time to time.

(7) The designs and installations regarding fire protection and safety measures including exit requirements and smoke containment and smoke management measures shall be undertaken through a fire engineer/fire consultant.

(8) Buildings shall be designed for compliance with earth quake resistance and resisting other natural hazards. The Completion Certificate shall mention that the norms have been followed in the design and construction of buildings for making the buildings resistant to earthquake, compliance with structural safety and fire safety requirements.

(9) The building requirements like size and area requirements of habitable rooms, kitchen, bathrooms and Water closets, other areas, corridor and staircase widths, service ducts, etc. and standards as specified in these rules and in National Building Code-2005 shall be complied with.

64. Location and Plot Area

(1) High Rise Buildings/Complexes shall be permissible only in areas notified by the Sanctioning Authority with prior approval from the Competent Authority from time to time.

(2) High Rise Buildings/Complexes shall not be permissible in congested areas and in gram kantam areas.

(3) The minimum plot area shall not be less than 2000sq.m.

(4) In respect of sites/plots proposed for high rise buildings and affected in road widening where there is a shortfall of the net plot size, up to 10% of such shortfall in net plot area would be considered with the proposed height and corresponding minimum all round setbacks.

65. Means of access

(1) A plot/site shall abut on a public road/public street with a minimum width of 12m.

(2) Main entrances to the premises shall be of adequate width to allow easy access to the fire engine and in no case it shall measure less than 6 m. The entrance gate shall fold back against the compound wall of the premises, thus leaving the exterior access way within the plot free for movement of fire service vehicles. If archway is provided over the main entrance the height of the archway shall not be at a height less than 5m.

66. All round Open Spaces /Set Backs

(1) The minimum abutting road width and all-round open space/setback for High Rise Buildings shall be as follows:

TABLE – 18

Minimum abutting road width and all-round open space/setback for High Rise Buildings

Sl. No.	Height of building (in meters)		Minimum abutting road width (in meters)	Minimum all-round open space (in meters)
	Above	Up to		
(A)	(B)	(C)	(D)	(E)
1	-	21	12	7
2	21	24	12	8
3	24	27	18	9
4	27	30	18	10
5	30	35	24	11
6	35	40	24	12
7	40	45	24	13
8	45	50	30	14
9	50	55	30	16
10	After 55m 0.5m additional setback for every 5m of height shall be insisted			

(2) The open space to be left between two blocks shall be equivalent to the open space mentioned in Column – **(E)** of the above Table and this shall not be considered for organized open space (Tot lot).

(3) In case of high rise buildings up to 30m height, it is permitted to transfer up to 2m of setback from one side to the other side, which needs to be uniform at any given point, subject to maintaining the minimum setback of 7m on all sides and not exceeding the permissible/allowable plinth area.

(4) The balcony projection of up to 2m may be allowed projecting onto the open spaces for upper floors from 6m height onwards.

(5) Where the lighting and ventilation of a building is through the means of a chowk or inner courtyard or interior open space/duct, such open space shall be open to sky and area of at least 25sq.m and no side shall be less than 3m.

(6) In every high rise building site, an organized open space shall be utilized as greenery, tot lot or soft landscaping, etc. and this shall be provided over and above the mandatory setbacks to be left in and around the building. This space shall be at least 10% of total site area at ground level open to sky and shall be a minimum width of 4.5m. This may be provided in one or more pockets with minimum area of 50sq.m at each location.

(7) A minimum of 2m wide green planting strip in the periphery on all sides within the setbacks (All round open spaces) are required to be developed and maintained.

(8) Buildings abutting major road of 30m and above width shall be permitted only after providing black-topped service roads of minimum 7m width with minimum 2 Lane carriageway within the defined right of way. It will be the responsibility of the developer/builder/owner to provide the above service road of the standards fixed by the Sanctioning Authority at his own cost. The Sanctioning Authority may consider sanctioning building permission if the developer/builder/ owner deposits the full cost for laying such service road to the Sanctioning Authority. The amount so levied and collected shall be maintained in a separate exclusive account by the Sanctioning Authority and utilized only for this purpose.

67. Parking Requirements

The parking requirements shall be in accordance with Rule 6 (30) and Table – 11 of CHAPTER-IV [*General Space Requirements and Services-Requirements of Parts of Buildings-Parking Spaces*] which is as given below.

[Extract of TABLE – 11]

Parking Requirements in Buildings

Sl. No.	Category of building/activity	Parking area to be provided as percentage of total built up area	
		Municipal Corporations & Selection Grade, Special Grade Municipalities	First Grade, Second Grade Municipalities, Nagar Panchayats and Gram Panchayats in Master Plan areas and in Development Authority Areas
(A)	(B)	(C)	(D)
1	Multiplexes	**60**	**50**
2	Information Technology Enabling Services Complexes, Shopping Malls (above 4000sq. m)	**50**	**40**
3	Business buildings, Cinema halls, Hotels, Kalyana Mandapams, Lodges, Offices, Other Commercial buildings, Restaurants & High-Rise Buildings / Complexes of Non Residential Category	**30**	**25**
4	Colleges, Godowns, Hospitals, Industrial buildings, Institutional buildings, Residential Apartment Complexes, Schools, Educational Buildings & Other Buildings	**20**	**20**

68. Building components

(1) Basement

(a) As provided in these Rules. [See Chapter IV]

(b) Travel Distance for Occupancy and Type of Construction as given in the Table below shall be followed. If travel distance exceeds that given in the table below, additional staircases shall be provided.

TABLE - 19

Travel Distance for Occupancy and Type of Construction

Sl. No.	Group of Occupancy	Maximum Travel Distance Construction (m)	
		Type 1 & 2	Type 3 & 4
(A)	(B)	(C)	(D)
1	Residential(A)	30.0	22.5
2	Educational(B)	30.0	22.5
3	Institutional	30.0	22.5
4	Assembly(D)	30.0	30.0
5	Business(E)	30.0	30.0
6	Mercantile(F)	30.0	30.0
7	Industrial(G)	45.0	Construction type 3 and 4 not permitted.
8	Storage(H)	30.0	Construction type 3 and 4 not permitted.
9	Hazardous(J)	22.5	Construction type 3 and 4 not permitted.

Notes:

1. *For fully sprinkled building, the travel distance may be increased by 50% of the values specified above.*
2. *Ramps shall be counted as one of the means of escape wherever permitted in National Building Code 2005.*

(2) Compartmentation

(a) The building shall be suitably compartmentalized so that fire/smoke remains confined to the area where fire incident has occurred and does not spread to the remaining part of the building.

(b) Compartmentation and Pressurization method shall be adopted (as per clause 4.10 of Part 4 of NBC, 2005) to protect escape routes against ingress of smoke, or toxic gases into the escape routes will be prevented.

(c)Pressurization shall be adopted for high rise buildings and building having mixed occupancy/multiplexes having covered area more than 500 m2.

(3) Corridors

(a) Exit corridors and passageways shall be of width not less than the aggregate required width of exit doorways leading from them in the direction of travel to the exterior.

(b) The minimum width of a corridor in a residential building shall be 1.2m for single loaded and 2.0m for double loaded and in all other buildings shall be 1.5m.

(c)Where stairways discharge through corridors and passageways, the height of corridors and passageways shall be not less than 2.4m.

(d) All means of exit including staircases, lifts lobbies and corridors shall be ventilated.

(4) Doorways

As provided in these Rules. [See Chapter IV]

(5) Glass Façade/Service Ducts/Shafts/ Refuge Area/ Vents

(a) An opening to the glass façade of minimum width 1.5m and height 1.5m shall be provided at every floor at a level of 1.2m from the flooring facing compulsory open space as well as on road side.

(b) Construction that complies with the fire rating of the horizontal segregation and has any gap packed with a non-combustible material to withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke.

(c) Mechanism of Opening: The openable glass panel shall be either left or right shall have manual opening mechanism from inside as well as outside. Such openable panels shall be marked conspicuously so as to easily identify the openable panel from outside.

(d) Fire seal to be provided at every floor level between the external glazing and building structure.

(e) The glazing used for the façade shall be of toughened (tempered) safety glass as per I.S.2553.

(f) To avoid fire propagation vertically from one floor to another floor, a continuous glass must be separated internally by a smoke/ fire seal which is of noncombustible material having a fire resistance rating of not less than 2 hours.

(g) Service ducts and shafts shall be enclosed by walls and doors with fire resistance rating as given in Tables 1 to 18 of Part IV of the NBC 2005. All such ducts/shafts shall be properly sealed and stopped fire ingress at all floor levels.

(h) A vent opening at the top of the service shaft shall be provided having an area between one-fourth and one-half of the area of the shaft.

(i) The openable vent of minimum 2.5% of the floor area shall be provided. The openable vent can be pop out type or bottom hinged provided with fusible link opening mechanism and shall also be integrated with automatic Smoke Detection System.

or

(i) Alternate vertical glass panels of the façade shall be openable type with the mechanism mentioned above in order to ventilate the smoke.

(ii) Refuge areas covered with the glass façade shall have all the panels fully openable (either left or right hinged) both from inside as well as outside.

(j) Glass quality and Practice of use of Glass in buildings shall have to be in conformity with the BIS codes as given in Table below:

TABLE - 20

Glass quality and Use of glass in buildings

Sl. No.	IS Code	Specifications
(A)	(B)	(C)

1	2553 (Part 1):1990	Specification for safety glass: Part 1 General purpose *(third revision)*
2	2835:1987	Specification for flat transparent sheet glass *(third revision)*
3	438:1994	Specification for silvered glass mirrors for general purposes *(second revision)*
4	5437:1994	Specification for figured rolled and wired glass *(first revision).*
5	14900:2000	Specification for transparent float glass.
6	16231 Part 1	General methodology for selection
7	16231 Part 2	Energy and Light
8	16231 Part 3	Fire and Loading
9	16231 Part 4	Safety related to Human Impact

(6) Lifts

General requirements of lifts shall be as follows:

(a) All the floors shall be accessible for 24 hours by the lifts.

(b) The lifts provided in the buildings shall not be considered as a means of escape in case of emergency.

(c) In a dual line arrangement (lifts opposite to each other) the lobby may be between 1.5 times to 2.5 times the depth of one car.

(d) For in-line (single line) arrangements the lobby may be typically half of the above recommendations.

(e) Grounding switch, at ground floor level, to enable the fire service to ground the lift shall also be provided.

(f) The lift machine room shall be separate and no other machinery shall be installed there in.

(g) Walls of lift enclosures and lift lobby shall have fire rating of 2 hour; (as given in Tables 1 to 18 of Part IV of the NBC 2005);

(h) Lifts shall have a vent at the top of area not less than 0.2sq.m.

(i) Lift car door shall have a fire resistance rating of 1 hour.

(j) Lift lobby doors in lift enclosures shall have fire resistance as given in Tables 1 to 18 of Part IV of the NBC 2005;

(k) Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at least 1 hour.

(l) If the lift shaft and lobby is in the core of the building, a positive pressure between 25 and 30 Pa shall be maintained in the lobby and a positive pressure of 50 Pa shall be maintained in the lift shaft. The mechanism for pressurization shall act automatically with the fire alarm; it shall be possible to operate this mechanically also.

(m) Lifts if communicating with the basement, the lift lobby of the basements shall be pressurized as suggested below:

(i) If the lift shaft and lobby is in the core of the building a positive pressure between 25 and 30 pa shall be maintained in the lobby and a possible pressure of 50 pa shall be maintained in the lift shaft. The mechanism for the pressurization shall act automatically with the fire alarm/sprinkler system and it shall be possible to operate this mechanically also.

(ii) Exit from the lift lobby, if located in the core of the building, shall be through a self-closing fire smoke check door of one-hour fire resistance.

(n) Telephone or other communication facilities shall be provided in lift cars and to be connected to fire control room for the building.

(o) Exit from the lift lobby, if located in the core of the building, shall be through a self-closing fire door of half an hour fire resistance.

(p) Suitable arrangements such as providing slope in the floor of lift lobby shall be made to prevent water used during firefighting, etc., at any landing from entering the lift shafts.

(q) A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise.

(r) The sign shall also contain a plan for each floor showing the locations of the stairways.

(s) Alternate source of power supply shall be provided for all the lifts through a manually operated changeover switch.

(t) For Pressurization Specifications of various building components refer NBC Chapter 4 Fire and Life Safety Clause 4.10 Pressurization of Staircases (Protected Escape Routes)

(7) Ramps

As provided in these Rules. [See Chapter IV]

(8) Stairways

(a) A staircase shall not be arranged round a lift shaft.

(b) The staircase shall be ventilated to the atmosphere at each landing and a vent at the top;

(c)The vent openings shall be of 0.5sq.m in the external wall and the top.

(d) If the staircase cannot be ventilated, because of location or other reasons, a positive pressure 50 Pa shall be maintained inside. The mechanism for pressurizing the staircase shall operate automatically with the fire alarm. The roof of the shaft shall be 1m above the surrounding roof.

(e) Glazing or glass bricks if used in staircase, shall have fire resistance rating of minimum 2 hour.

(f) The Minimum width of staircase for different types of high-rise buildings shall be as per the table given below:

TABLE - 21

Minimum width of staircase for different types of high-rise buildings

S. No.	Types of Building	Width (m)
(A)	(B)	(C)
1	Residential buildings (dwellings)	1.0
2	Residential hotel buildings	1.5
3	Assembly buildings like auditorium, theatres and cinemas	2.0
4	Educational buildings up to 30m in height	1.5
5	Institutional buildings like hospitals	2.0
6	All other buildings	1.5

(g) The minimum width of treads without nosing shall be 0.25m for staircase for residential buildings.

(h) In the case of other buildings the minimum width of tread shall be 0.3m.

(i) The treads shall be constructed and maintained in a manner to prevent slipping.

(j) The maximum height of riser shall be 0.19m in the case of residential buildings

(k) The maximum height of riser shall be 0.15m in the case of other buildings.

(l) The no. of risers shall be limited to 15 per flight.

(m) Handrails shall be provided with a minimum height of 0.9m from the center of the tread.

(n) The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2m.

(o) Access to main staircase shall be gained through adequate fire resistance rating as given in Tables 1 to 18 of Part IV of the NBC 2005. Automatic closing doors placed in the enclosing walls of the staircases. It shall be a swing type door opening in the direction of the escape.

(p) No living space, store or other fire risk shall open directly into the staircase or staircases.

(q) External exit door of staircase enclosure at ground level shall open directly to the open spaces or can be reached without passing through any door other than a door provided to form a draught lobby.

(r) The exit sign with arrow indicating the way to the escape route shall be provided at a height of 0.5m from the floor level on the wall and shall be illuminated by electric light connected to corridor circuits. All exit way marking signs should be flushed with the wall and so designed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipment.

(s) All landings of floor shall have floor indication boards indicating the number of floor. The floor indication board shall be placed on the wall immediately facing the flight of stairs and nearest to the landing. It shall be of size not less than 0.5m x 0.5m and it shall be prominently on the wall facing the staircase.

(t) In case of single staircase it shall terminate at the ground floor level and the access to the basement shall be by a separate staircase. However, the second staircase may lead to basement levels provided the same is separated at ground level by either a ventilated lobby with discharge points at two different ends or through enclosures with fire resistance rating door as given in Tables 1 to 18 of Part IV of the NBC 2005 or through a fire protected corridor.

(u) There shall be at least one fire escape staircase and lift.

(v) These staircases and lifts shall be got certified from the manufacturer's authorized service technical personnel from time to time.

69. Building Services

(1) Air-conditioning
As provided in these Rules. [See Chapter VI]

(2) Alternate Source of Electric Supply

As provided in these Rules. [See Chapter VI]

(3) Boiler Room
As provided in these Rules. [See Chapter VI]

(4) Electrical Services

As provided in these Rules. [See Chapter VI]

(5) Gas supply

(a) Town Gas/L.P. Gas Supply Pipes – Where gas pipes are run in buildings, the same shall be run in separate shafts exclusively for this purpose and these shall be on external walls, away from the staircases. There shall be no interconnection of this shaft with the rest of the floors.

(b) LPG distribution pipes shall always be below the false ceiling. The length of these pipes shall be as short as possible. In the case of kitchen cooking range area, apart from providing hood, covering the entire cooking range, the exhaust system should be designed to take care of 30cu.m per minute per sq. m of hood protected area. It should have grease filters using metallic grill to trip oil vapors escaping into the fume hood.

Note: For detailed information on gas pipe installations, reference may be made to Para.9 'Plumbing Services, Section 3 Gas Supply', of National Building Code of India.

(c) For large/commercial kitchens all wiring in fume hoods shall be of fiberglass insulation. Thermal detectors shall be installed into fume hoods of large kitchens for hotels, hospitals and similar areas located in high rise

buildings. Arrangements shall be made for automatic tripping of the exhaust fan in case of fire.

(d) If LPG is used, the same shall be shut off. The voltage shall be of 24 V or 100 V DC operated with the external rectifier. The valve shall be of the hand re-set type and shall be located in an area segregated from cooking ranges. Valves shall be easily accessible. The hood shall have manual facility for steam or carbon dioxide gas injection, depending on duty condition; and Gas meters shall be housed in a suitably constructed metal cupboard located in a well-ventilated space, keeping in view the fact that LPG is heavier than air and town gas is lighter than air.

(6) Helipad

As provided in these Rules. [See Chapter VI]

(7) Staircase and Corridor Lighting

As provided in these Rules. [See Chapter VI]

(8) Transformers

(a) If transformers are housed in the building below the ground level it shall be necessarily in the first basement in separate fire resistance room of 4 hours rating.

(b) Transformer shall be dry type and shall be kept in an enclosure with walls, doors and cut-outs having fire resistance rating of 4 hour.

(c)The room shall necessarily be at the periphery of the basement having separate and direct access from open area at ground floor through a fire escape staircase.

(d) The entrance to the room shall be provided with a steel door of 2 hours fire rating. A curb of a suitable height shall be provided at the entrance in order to prevent the flow of oil from ruptured, transformer into other parts of the basement.

(e) The switchgears shall be housed in a separate room separated from the transformer bays by a fire-resisting wall with fire resistance not less than 4 hours.

(f) The transformer shall be protected by an automatic foam sprinkler system. When housed at ground floor level it/they shall be cut-off from the other portion of premises by Fire Resisting Walls of 4 hours rating.

(g) A tank of RCC construction of adequate capacity shall be provided at lower basement level, to collect the oil from the catch pit in case of emergency. The pipe connecting the catch-pit to the tank shall be of non-combustible construction and shall be provided with a flame-arrester.

(h) The electric sub-station shall be located in a separate building in accordance to I.E. Rules 68(I) and 64(I) (a).

(i) If this is not possible due to site conditions, the sub-station shall be located on the ground floor.

(j) As far as possible sub-station shall not be installed in a basement, for such situations special provisions like mechanical ventilation, wherever required, cable ducting, cable trays, top/bottom entry of HV/LV cable,

hooks on Transformer(s) & HV panels, adequate fire detection and firefighting arrangement, adequate drainage, effective measures to prevent flooding etc. shall be provided.

(k) Adequate precautions shall also be taken for water proofing to prevent seepage of water.

(l) A ramp shall also be provided with a slope, not steeper than 1 in 7, for easy movement of equipment to and from sub-station.

(m) Fire regulations – The installations shall be carried out in conformity with the local regulations and rules there under wherever they are in force. At other places NBC guidelines shall be followed.

(9) Fire Safety / Disaster Management

Refer ***Chapter-VI [Fire Protection & Fire Safety Requirements*** of these Rules.

(10) Structural Safety

Refer ***Chapter-V [Provisions for Structural Safety]*** of these Rules***.***

(11) Sustainable Environment and Buildings

Refer ***Chapter-X-5 [*****Green Buildings]** of these Rules.

(12) General

(a) Architectural elements such as louvers, pergolas, other sunshine materials should be free from FAR.

(b) Any architectural roof top structures would also be permitted out of FAR if not used for habitable or commercial purposes.

(c) Building elements such as sky bridges and landscape terraces which are meant for community purposes only shall be permitted free of FAR

(d) Services can be permitted on roofs with adequate screening for the same.

(e) Atrium/ Atria at any floor will be counted only once in the FAR. Atrium may be enclosed by light roofing or R.C.C.

(f) Scissor staircase would be permitted provided all travel distance and fire norms are adhered to.

(g) Stilts in high-rise will not be restricted to height of 2.4m as long as it is used for parking.

(h) Multilevel car parking with car lifts would be permitted with adequate fire safety.

70. Special type of High rise buildings

These buildings shall follow the specifications as given below while conforming to all the other provisions as given above:

(1) Tower and Podium Type Building:

(a) Height of the building shall be allowed up to 50m.

(b) For Podium, i.e., Ground plus first floor: all-round setbacks shall be 7m.

(c) For Tower block: The maximum coverage shall be 50 % of the Podium Block i.e. setback area shall be at least 50% of the Podium Block subject to a minimum of 3m on any side.

(d) No projection shall be made into the setback.

(e) The fire safety and fire escape measures for the Tower Block shall be independent of the Podium Block.

(2) "Stepped Type" or "Pyramidal Type" Building:

(a) Such type of High Rise Building blocks may be allowed for heights above 30m with the following open space requirements:

(b) At Ground level: Minimum 9m all round open space for the first five floors.

(c)At Upper floors: Increase of 2m all round open space or more, for every 5 upper floors or 15m height or part thereof, over and above the ground level open space of minimum 9m.

(d) No projection shall be made into the setback.

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CHAPTER-X-1

CONSERVATION OF HERITAGE SITES, HERITAGE BUILDINGS, HERITAGE PRECINCTS AND NATURAL FEATURE AREAS

71. Applicability and General

(1) These regulations shall apply to heritage sites which shall include those buildings, artifacts, structures, streets, areas and precincts of historic, architectural, aesthetic, cultural or environmental value (hereinafter referred to as Listed Heritage Buildings/Listed Heritage Precincts) and those natural feature areas of environmental significance or of scenic beauty including, but not restricted to, sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths (hereinafter referred to as 'listed natural feature areas') which shall be listed in notification(s) to be issued by the State Government/identified in Master Plan or any other plans notified by the Authority.

(2) The provisions in this chapter are beyond the regulations applicable on the *Prohibited and Regulated areas* as defined by Ancient Monuments and Archaeological Sites and Remains (AMASR) Act 2010, where ***site specific Heritage Bye-Laws*** are prepared and notified by the Competent Authority (National Monuments Authority) under the AMASR Act shall be applicable.

(3) NOC shall have to be obtained by submission of required documents as may be necessary, including ***"Heritage Impact Assessment report"***, if so necessitated by the National Monuments Authority.

72. Definitions

(1) "Heritage building" means and includes any building of one or more premises or any part thereof and/or structure and/or artifact which requires conservation and/or preservation for historical and/or architectural and/or artisanry and/or aesthetic and/or cultural and/or environmental and/or ecological purpose and includes such portion of land adjoining such building or part thereof as may be required for fencing or covering or in any manner preserving the historical and/or architectural and/or aesthetic and/or cultural value of such building.

(2) "Heritage Precincts" means and includes any space that requires conservation and/or preservation for historical and/or architectural and/or aesthetic and/or cultural and/or environmental and/or ecological purpose. Walls or other boundaries of a particular area or place or building or may enclose such space by an imaginary line drawn around it.

(3) "Conservation" means all the processes of looking after a place so as to retain its historical and/or architectural and/or aesthetic and/or cultural significance and includes maintenance, preservation, restoration, reconstruction and adoption or a combination of more than one of these.

(4) "Preservation" means and includes maintaining the fabric of a place in its existing state and retarding deterioration.

(5) "Restoration" means and includes returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without introducing new materials.

(6) "Reconstruction" means and includes returning a place as nearly as possible to a known earlier state and distinguished by the introduction of materials (new or old) into the fabric. This shall not include either recreation or conjectural reconstruction.

73. Responsibility of the owners of heritage buildings

It shall be the duty of the owners of heritage buildings and buildings in heritage precincts or in heritage streets to carry out regular repairs and maintenance of the buildings. The State Government/Local Authority/Development Authority concerned shall not be responsible for such repair and maintenance except for the buildings owned by the Government/Local Authority/Development Authority.

74. Restrictions on development / re-development / repairs etc.

(1) No development or redevelopment or engineering operation or additions / alterations, repairs, renovations including painting of the building, replacement of special features or plastering or demolition of any part thereof of the said listed buildings or listed precincts or listed natural feature areas shall be allowed except with the prior permission of Local Authority/Development Authority.

(2) Before granting such permission, the agency concerned shall consult the Heritage Conservation Committee to be appointed by the State Government and shall act in accordance with the advice of the Heritage Conservation Committee.

(a) Provided that, before granting any permission for demolition or major alterations/additions to listed buildings (or buildings within listed streets or precincts), or construction at any listed natural features, or alteration of boundaries of any listed natural feature areas, objections and suggestions from the public shall be invited and shall be considered by the Heritage Conservation Committee.

(b) Provided that, only in exceptional cases, for reasons to be recorded in writing, Local Authority/Development Authority may refer the matter back to the Heritage Conservation Committee for reconsideration.

(c) However, the decision of the Heritage Conservation Committee after such reconsideration shall be final and binding.

75. Penalties

(1) Violation of the regulations shall be punishable under the provisions regarding unauthorized development under the provisions of the respective Acts of Local Authority/Development Authority. In case of proved deliberate neglect of and/or damage to Heritage Buildings and Heritage Precincts, or if the building is allowed to be damaged or destroyed due to neglect or any other reason, in addition to penal action provided under the concerned Act, no permission to construct any new building shall be granted on the site if a Heritage Building or Building in a Heritage Precinct is damaged or pulled

down without appropriate permission from Local Authority/Development Authority.

(2) It shall be open to the Heritage Conservation Committee to consider a request for re-building/reconstruction of a Heritage Building that was unauthorizedly demolished or damaged, provided that the total built-up area in all floors put together in such new construction is not in excess of the total built-up area in all floors put together in the original Heritage Building in the same form and style in addition to other controls that may be specified.

76. Preparation of list of heritage sites including heritage buildings, heritage precincts and listed natural feature areas

(1) The list of heritage sites including Heritage Buildings, Heritage Precincts and listed Natural Features Areas is to be prepared and supplemented by the Local Authority/Development Authority on the advice of the Heritage Conservation Committee and shall obtain the preliminary approval of the Government.

(2) Before being finalized, objections and suggestions of the public are to be invited and on the recommendation of the Heritage Committee on the objections and suggestions, the Government shall accord the final approval of the list heritage of sites including Heritage Buildings, Heritage Precincts and listed Natural Features Areas which shall be notified.

(3) The said list to which the regulation applies shall not form part of this regulation for the purpose of Building Rules.

(4) The list may be supplemented from time to time by Government on receipt of proposal from the agency concerned or by Government *suo-moto* provided that before the list is supplemented, objections and suggestions from the public be invited and duly considered by the State Government after obtaining a detailed recommendation from the Heritage Conservation Committee on the objections and suggestions received.

(5) When a building or group of buildings or natural feature areas are listed, it would automatically mean (unless otherwise indicated) that the entire property including its entire compound/plot boundary along with all the subsidiary structures and artifacts etc. within the compound/plot boundary, etc. shall form part of list.

77. Alteration/modification/relaxation in development norms

On the advice of the said Heritage Conservation Committee to be appointed by the Government and for reasons to be recorded in writing, the Local Authority/Development Authority shall follow the procedure as per Development Authority Act, to alter, modify or relax the Development Control Norms prescribed in the Master Plan, if required, for the conservation or preservation or retention of historic or aesthetic or cultural or architectural or environmental quality of any heritage site.

78. Heritage precincts / Natural feature areas

(1) In cases of streets, precincts, areas and (where deemed necessary by the Heritage Conservation Committee) natural feature areas notified, development permissions shall be granted in accordance with the special separate

regulation prescribed for respective streets, precincts/natural feature areas which shall be framed by the Local Authority/Development Authority on the advice of the Heritage Conservation Committee.

(2) Before finalizing the special separate regulations for precincts, streets, natural features, areas, the draft of the same shall be published in the official gazette and in leading newspapers for the purpose of inviting objections and suggestions from the public.

(3) All objections and suggestions received within a period of 30 days from the date of publication in the official gazette shall be considered by the Local Authority/Development Authority/Heritage Conservation Committee.

(4) After consideration of the above suggestions and objections, the agency concerned, acting on the advice of the Heritage Conservation Committee shall modify (if necessary) the aforesaid draft separate regulations for streets, precincts, areas and natural features and forward the same to Government for notification.

79. Road widening

Widening of the existing roads under the Master Plan or Town/Zonal Development Plan or in the Layout Plan shall be carried out considering the existing heritage buildings (even if they are not included in a Heritage Precinct) or which may affect listed natural features areas.

80. Incentive uses for heritage buildings

In cases of buildings located in non-commercial use zones included in the Heritage Conservation List, if the owner/owners agree to maintain the listed heritage building as it is in the existing state and to preserve its heritage state with due repairs and the owner/owners/lessees give a written undertaking to that effect, the owner/owners/lessees may be allowed with the approval of the Heritage Conservation Committee within permissible use zone to convert part or whole thereof of the non-commercial area within such a heritage building to commercial/office use/hotel. Provided that if the heritage building is not maintained suitably or if the heritage value of the building is spoiled in any manner, the commercial/office/hotel use shall be disallowed.

81. Maintaining skyline and architectural harmony

After the guidelines are framed, buildings within heritage precincts or in the vicinity of heritage sites shall maintain the skyline in the precinct and follow the architectural style (without any high-rise development) as may be existing in the surrounding area, so as not to diminish or destroy the value and beauty of or the view from the said heritage sites. The development within the precinct or in the vicinity of heritage sites shall be in accordance with the guidelines framed by the Local Authority/Development Authority on the advice of the Heritage Conservation Committee or separate regulations/guidelines, if any, prescribed for respective zones by Local Authority/Development Authority.

82. Restrictive covenants

Restrictions existing as imposed under covenants, terms and conditions on the leasehold plots either by the State Government or by the Local Authority/Development Authority shall continue to be imposed in addition to

Development Control Regulations. However, in case of any conflict with the heritage preservation interest/environmental conservation, this Heritage Regulation shall prevail.

83. Grading of the listed buildings / listed precincts

(1) Listed Heritage Buildings/Listed Heritage Precincts may be graded into three categories.

(2) The definition of these and basic guidelines for development permissions are as given below.

(3) Listing does not prevent change of ownership or usage.

(4) However, change of use of such Listed Heritage Building/Listed Precincts is not permitted without the prior approval of the Heritage Conservation Committee.

(5) Use should be in harmony with the said listed heritage site.

TABLE - 22

Grading of Listed Heritage Buildings / Precincts

(A) Definition		
Grade-I	**Grade-II**	**Grade-III**
Heritage Grade-I comprises buildings and precincts of national or historic importance, embodying excellence in architectural style, design, technology and material usage and/or aesthetics; they may be associated with a great historic event, personality, movement or institution. They have been and are the prime landmarks of the region. All natural sites shall	Heritage Grade-II (A&B) comprises of buildings and precincts of regional or local importance possessing special architectural or aesthetic merit, or cultural or historical significance though of a lower scale than Heritage Grade-I. They are local landmarks, which contribute to the image and identity of the region. They may be the work of master craftsmen or may be models of proportion and ornamentation or designed to suit a particular climate.	Heritage Grade-III comprises building and precincts of importance for townscape; that evoke architectural, aesthetic, or sociological interest through not as much as in Heritage Grade-II. These contribute to determine the character of the locality and can be representative of lifestyle of a particular community or region and may also be distinguished by setting, or special character of the façade and uniformity of height,
(B) Objective		
Grade-I	**Grade-II**	**Grade-III**

Heritage Grade-I richly deserves careful preservation.	Heritage Grade-II deserves intelligent conservation.	Heritage Grade-III deserves intelligent conservation (though on a lesser scale than Grade-II and special protection to unique features and attributes).

(C) Scope for Changes		
Grade-I	**Grade-II**	**Grade-III**
No interventions be permitted either on exterior or interior of the heritage building or natural features unless it is necessary in the interest of strengthening and prolonging the life of the buildings/or precincts or any part or features thereof. For this purpose, absolutely essential and minimum changes would be allowed and they must be in conformity with the original.	Grade-II (A): Internal changes and adaptive re-use may by and large be allowed but subject to strict scrutiny. Care would be taken to ensure the conservation of all special aspects for which it is included in Heritage Grade- II. Grade-II (B): In addition to the above, extension or additional building in the same plot or compound could in certain circumstances, be allowed provided that the extension / additional building is in harmony with (and does not detract from) the existing heritage building(s) or precincts especially in terms of height and facade.	Internal changes and adaptive re- use may by and large be allowed. Changes can include extensions and additional buildings in the same plot or compound. However, any changes should be such that they are in harmony with and should be such that they do not detract from the existing heritage building/precinct.
(D) Procedure		
Grade-I	**Grade-II**	**Grade-III**
Development permission for the changes would be given on the advice of the Heritage Conservation	Development permission for the changes would be given on the advice of the Heritage Conservation Committee.	Development permission for changes would be given on the advice of the Heritage Conservation Committee.
(E) Vistas/Surrounding Development		
Grade-I	**Grade-II**	**Grade-III**

All development in areas surrounding Heritage Grade-I shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-I.	All development in areas surrounding Heritage Grade-II shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-II.	All development in areas surrounding Heritage Grade-III shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-III.

84. Opinion of the Heritage Conservation Committee

Nothing mentioned above should be deemed to confer a right on the owner/occupier of the plot to demolish or reconstruct or make alterations to his heritage building/buildings in a heritage precinct or on a natural heritage site if in the opinion of the Heritage Conservation Committee, such demolition/reconstruction/alteration is undesirable.

85. Approval to preserve the beauty of the area

The Heritage Conservation Committee shall have the power to direct, especially in areas designated by them, that the exterior design and height of buildings should have their approval to preserve the beauty of the area.

86. Signs and outdoor display structures/including street furniture on heritage sites

Local Authority/Development Authority on the advice of the Heritage Conservation Committee shall frame regulations or guidelines to regulate signs, outdoor display structures and street furniture on heritage sites.

87. Composition of Heritage Conservation Committee

(1) The Heritage Conservation Committee shall be appointed by the State Government.

(2) The Committee shall have the powers to co-opt up to three additional members who may have related experience.

(3) The tenure of the Chairman and Members of other than Government Department /Local Bodies shall be as prescribed by the Government.

88. The terms of reference of the Committee

(1) To advice the Local Authority/Development Authority whether development permission is to be granted under Building Rules and the conditions of permission if any required.

(2) To prepare a supplementary list of heritage sites, which include buildings artifacts, structures, streets, areas, precincts of historic, aesthetic, architectural, cultural, or environmental significance and a supplementary list of natural feature areas of environmental significance, scenic beauty including but not restricted to sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths etc. to which this Building Rule would apply.

(3) To advise whether any relaxation, modification, alteration, or variance of any of the Building Rules is required in connection with conservation and preservation of any Listed Heritage Buildings/Listed Heritage Precincts.

(4) To frame special regulations/guidelines for precincts and if necessary for natural feature areas to advise the Local Authority/Development Authority regarding the same;

(5) To recommend to the Local Authority/Development Authority guidelines to be adopted by those private parties or public/government agencies who sponsor beautification schemes at heritage sites;

(6) To prepare special designs and guidelines/publications for listed buildings, control of height and essential façade characteristics such as maintenance of special types of balconies and other heritage items of the buildings and to suggest suitable designs adopting appropriate materials for replacement keeping the old form intact to the extent possible.

(7) To prepare guidelines relating to design elements and conservation principles to be adhered to and to prepare other guidelines for the purposes of this Regulation;

(8) To advise the Local Authority/Development Authority /on any other issues as may be required from time to time during course of scrutiny of development permissions and in the overall interest of heritage/conservation;

(9) To advice the Government either independently or through or on behalf of the Local Authority/Development Authority in cases of Appeals under Local Authority/Development Authority Act in cases of listed buildings/heritage buildings and listed precincts/heritage precincts and listed natural feature areas.

89. Implications of listing as heritage buildings

The Regulations do not amount to any blanket prevention of demolition or of changes to Heritage Buildings. The only requirement is to obtain clearance from Local Authority/Development Authority as the case may be and Heritage Conservation Committee from heritage point of view.

90. Ownership not affected

Sale and purchase of Heritage Buildings does not require any permission from Local Authority/Development Authority/Heritage Conservation Committee. The Regulations do not affect the ownership or usage. However, such usage should be in harmony with the said listed precincts/buildings. Local Authority/Development Authority shall ensure that the development permission relating to these buildings is given within 30 days whenever such application is submitted.

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CHAPTER–X-2

PROVISIONS FOR DIFFERENTLY ABLED, ELDERLY AND CHILDREN

91. Applicability and General

(1) These regulations shall apply to all buildings and facilities used by the public such as educational, institutional, assembly, commercial, business, mercantile buildings constructed on plot having an area of more than 2000sq.m.

(2) It does not apply to private and public residences.

(3) These requirements are concerned with non-ambulatory disabilities, semi-ambulatory disabilities, sight disabilities, hearing disabilities, and disabilities of in-coordination, aging, allergies, heart and lung diseases, epilepsy, hemophilia, incontinence and enterostomy.

(4) It is intended to make all buildings and facilities used by the public accessible to, and functional for the differently abled, elderly and children through and within their doors, without loss of function, space or facility where the general public is concerned.

(5) In case of practical difficulty, unnecessary hardship, or extreme differences, the Authority may grant exceptions from the literal requirements of these provisions (guidelines) or permit the use of other methods or materials, but only when it is clearly evident that equivalent facilities and protection are thereby secured.

92. Definitions

(1) Aging

Those manifestations of the aging processes that significantly reduce mobility, flexibility, co-ordination, and perceptiveness but are not accounted for in the categories mentioned in **'Disabilities' (3) (a) to (i)**.

(2) Appropriate Number

The number of a specific item that would be necessary, in accordance with the purpose and function of building or facility, to accommodate individuals with specific disabilities in proportion to the anticipated number or individuals with disabilities who would use a particular building or facility.

(3) Disabilities

(a) Non-ambulatory disabilities

Impairments that, regardless of cause or manifestation, for all practical purposes, confine individuals to wheelchairs.

(b) Semi-ambulatory disabilities

Impairments that cause individuals to walk with difficulty or insecurity. Individuals using braces or crutches, amputees, arthritis, spastics and those with pulmonary and cardiac ills may be semi-ambulatory.

(c) Sight disabilities

Total blindness or impairments affecting sight to the extent that the individual functioning in public areas is insecure or exposed to danger.

(d) Hearing disabilities

Deafness or hearing handicaps that might make an individual insecure in public areas because he is unable to communicate or hear warning, signals.

(e) Disabilities of in-coordination

Faulty co-ordination or palsy from brain, spinal or peripheral nerve injury.

(f) People with allergies

People with allergies may be sensitive to dust, mildew, pollen, animal hair, formalin, turpentine, etc. Some are sensitive to contact with substances and materials, such as, nickel, chromium and rubber.

(g) People with heart and lung diseases

People with heart and lung diseases may only be able to walk short distances and may be unable to climb stairs. The requirements of these people are similar to those with impaired mobility.

(h) People with epilepsy, hemophilia, etc.

The requirements of those with epilepsy, hemophilia, etc. are related primarily to the design of buildings and the need to minimize the risk of injury caused by falling or encountering obstacles.

(i) People with incontinence, enterostomy operations, etc

The requirements of people with incontinence, enterostomy operations, etc. (colostomies, ileostomies and urostomies) are mainly related to bathroom provision. In certain circumstances, for example, in public water-closet compartments, it may be desirable to provide a special sink for emptying urine bags.

(4) Fixed Turning Radius, Front Structure to Rear Structure

The turning radius of a wheelchair, left front-foot platform to right rear wheel, or right front-foot platform to left rear wheel, when pivoting on a spot.

(5) Fixed Turning Radius Wheel

The tracking of the caster wheels and large wheels of a wheelchair when pivoting on a spot.

(6) Involved (Involvement)

A portion or portions of the human anatomy or physiology, or both, that have a loss or impairment of normal function as a result of genesis, trauma, disease, inflammation or degeneration.

(7) Ramps, Ramps with Gradients

Ramps with gradients (gradual slope joining two level surfaces) that deviate from what would otherwise be considered the normal level. An exterior ramp, as distinguished from a 'walk', would be considered an appendage to a building leading to a level above or below the existing ground level.

(8) Walk-Walks

'Walk' and 'walks' defined as a predetermined prepared surface, exterior pathway leading to or from a building or facility, or from one exterior area to another, placed on the existing ground level and not deviating from the level of the existing ground immediately adjacent.

93. Site Development

(1)Accessibility

Almost any building can be made accessible to differently abled persons by so planning the site that the terraces, retaining walls and winding walks are used effectively. Site development is the most effective means to resolve the problems created by topography, definitive architectural designs or concepts, water table, existing streets, and typical problems, singularly or collectively, so that aggress, ingress and egress to buildings by differently abled maybe facilitated while preserving the desired design and effect of the architecture.

(2) Walks

(a) Public walks should be at least 1200mm wide and should have a gradient not greater than 1 in 20.

(b) It is essential that the gradient of walks and driveways be less than that prescribed for ramps, since walks would be devoid of handrails and kerbs and would be considerably longer and more vulnerable to the elements.

(c) Walks of near maximum grade and considerable length should have level areas at intervals for purposes of rest and safety.

(d) Walks or driveways should have a non-slip surface.

(e) Such walks shall be of a continuing common surface not interrupted by steps or abrupt changes in level.

(f) Wherever walks cross other walks, driveways, or parking lots they should blend to a common level.

- (i) This requirement, does not require the elimination of kerbs, which, particularly if they occur at regular intersections, are a distinct safety feature for all of the challenged, particularly the blind. The preferred method of meeting the requirement is to have the walk incline to the level of the street.

- (ii) At principal intersections, it is vitally important that the kerbs run parallel to the street, up to the point where the walk is inclined, at which point the kerb would turn in and gradually meet the level of the walk at its highest point. A less preferred method would be to gradually bring the surface of the driveway or street to the level of the walk. The disadvantage of this method is that a blind person would not know when he has left the protection of a walk and has entered the hazards of a street or driveway (see Fig 1).

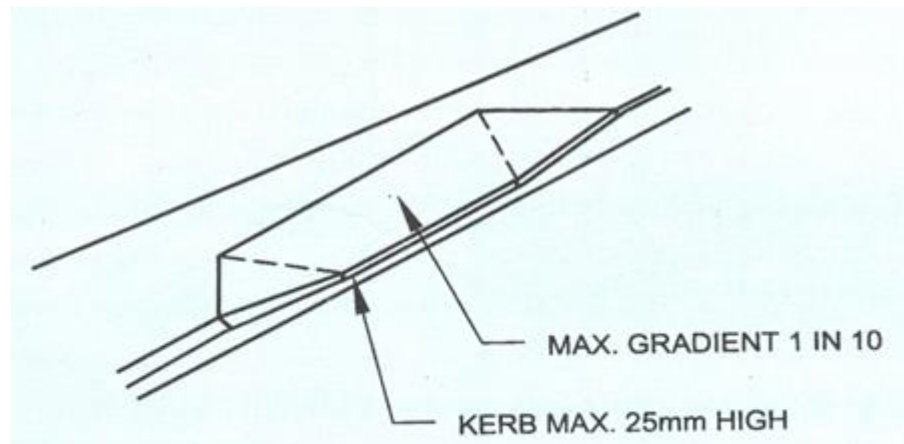


FIG. 1 SUITABLE METHOD OF BLENDING PAVEMENT AND ROADWAY SURFACES

(g) A walk shall have a level platform at the top which is at least 1500mm long, if a door swings out onto the platform or towards the walk. This platform shall extend at least 300mm beyond each side of the doorway.

(h) A walk shall have a level platform at least 900 mm deep, if the door does not swing onto the platform or towards the walk. This platform shall extend at least 300 mm beyond each side of the doorway.

(3) Parking Space

(a) Spaces that are accessible and approximate to the facility should be set aside and identified for use by individuals with physical disabilities.

(b) A parking space open on one side, allowing room for individuals in wheelchairs or individuals on braces and crutches to get in and out of an automobile onto a level surface, is adequate. It should have a minimum width of 2700 mm preferably 2800mm for ambulant disabled and minimum 3000 mm preferably 3300mm for wheel chair users.

(c) Parking spaces for individuals with physical disabilities when placed between two conventional diagonal or head-on parking spaces should be 3.6m to 3.8m wide and the length of the aisle should be 7.3m, 6.1m and 6.5m for head-on, 90° and 60° parking respectively.

(d) Care in planning should be exercised, so that individuals in wheelchairs and individuals using braces and crutches are not compelled to wheel or walk behind parked cars.

(e) Consideration should be given to the distribution of spaces for use by the disabled in accordance with the frequency and persistency of parking needs. Surface parking for two car spaces shall be provided near entrance for the physically handicapped persons with maximum travel distance of 30m from building entrance.

(f) The information stating that the space is reserved for wheel chair users shall be conspicuously displayed.

(g) Guiding floor materials shall be provided or a device, which guides visually impaired persons with audible signals, or other devices, which serves the same purpose, shall be provided.

(h) Walks shall be in conformity with 93 (2) [Walks].

94. Buildings

(1)Ramps with Gradients

Where ramps with gradients are necessary or desired, they shall conform to the following requirements (see Fig. 2).

(a) A ramp when provided should not have a slope greater than 1 in 20 or maximum of 1 in 12 for short distance up to 9000mm.

(b) A ramp shall have handrails on at least one side, and preferably two sides, that are 900mm high, measured from the surface of the ramp, that are smooth, and that extend 300mm beyond the top and bottom of the ramp. Where major traffic is predominantly children, the handrails should be placed 760mm high.

Notes:

(i) Where handrails are specified to be of heights other than 80cm, it is recommended that two sets of handrails be installed to serve all people.

(ii) Where major traffic is predominantly children, particularly physically disabled children extra care should be exercised in the placement of handrails, in accordance with the nature of the facility and the age group or groups being serviced (see also 94. Buildings).

(iii) Care should be taken that the extension of the handrails is not in itself a hazard. Extension up to 300 mm may be made on the side of a continuing wall.

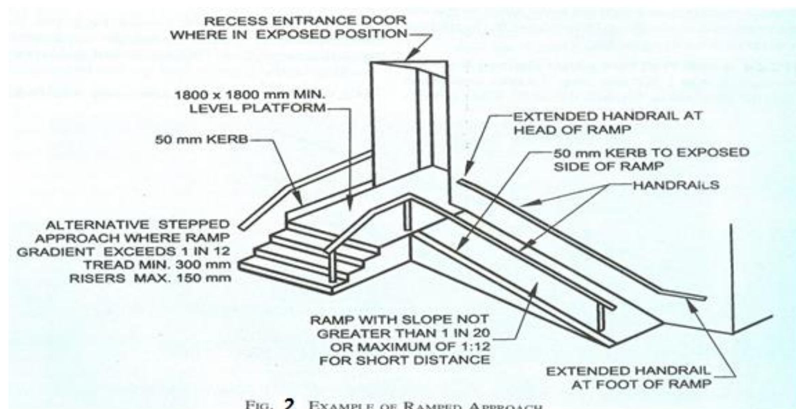


FIG. 2 EXAMPLE OF RAMPED APPROACH

(c) A ramp shall have a surface that is non-slip surface and if length is 3500mm, the minimum width shall be 1500mm.

(i) The provision of non-slip surfaces on ramps greatly assists the challenged persons with semi ambulatory and ambulatory disabilities. Non-slip surfaces are provided by many finishes and materials.

(ii) The surfaces of the concrete ramps can be made nonskid by brooming the surface or by finishing with an indenting roller.

(d) A ramp shall have a level platform at the top which is at least 1800mm long, if a door swings out onto the platform or toward the ramp. This platform shall extend at least 300mm beyond each side of the doorway (see Fig.3).

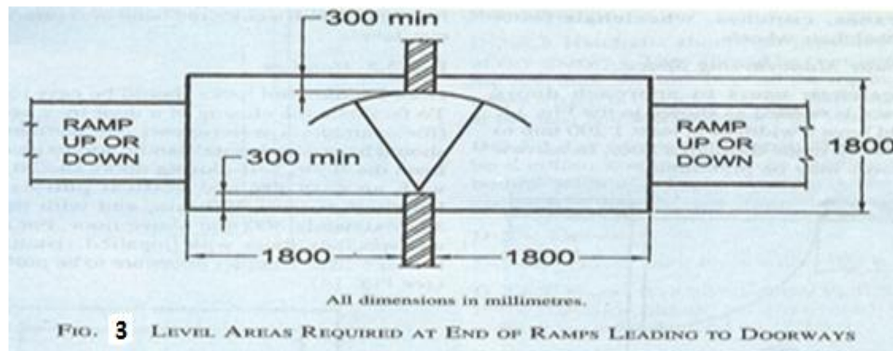


Fig. 3 Level Areas Required at End of Ramps Leading to Doorways

(e) Each ramp shall have at least 1800mm of straight clearance at the bottom.

(f) Ramps shall have level platforms at 10m to 12m intervals for purposes of rest and safety, and shall have platforms minimum 1.5m length wherever they turn.

(g) For visually impaired people, ramps may be colour contrasted with landing.

(h) To minimize rise to wheelchair users, ramps should be equipped with herbs approximately 50 mm high at exposed sides.

(2)Entrances

(a) At least one primary entrance to each building shall be usable by individuals in wheelchairs (see Fig.4A) and shall be indicated by a sign (see Fig.4B).

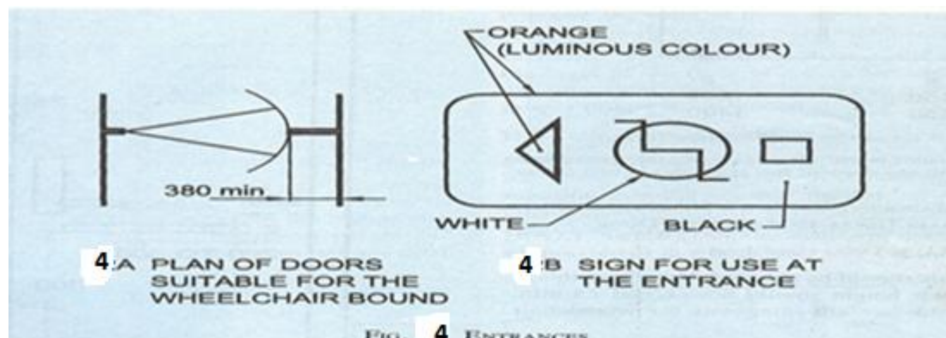


Fig. 4 Entrances

(b) At least one entrance usable by individuals in wheelchairs shall be on a level that would make the elevators accessible.

(3)Corridor connecting the entrance/exit

The corridor connecting the entrance/exit leading directly outdoors to a place where information concerning the overall use of the specified building can be provided to visually impaired persons either by a person or by signs, shall be provided as follows:

(a) Guiding floor materials' shall be provided or device that emits sound to guide visually impaired persons.

(b) The minimum width shall be 1500mm.

(c) In case there is a difference of level, slope ways shall be provided with a slope of 1:12.

(d) Handrails shall be provided for ramps/slope ways.

(4)Doors and Doorways

(a) Door width

To enable wheelchair users to pass through doors, the minimum clear width should be 900mm and shall be operable by a single effort. In certain cases the clear width should be 900mm to 1000m, for example, if the wheelchair has to be turned in the doorway, where there is a door-closer or at entrance doors to public buildings and in other situations where there is considerable traffic.

(i) Two-leaf doors are not usable by those with disabilities defined in 92 (1) [Aging], 92 (2) [appropriate Number] and 92 (5) [Fixed Turning Radius Wheel] unless they operate by a single effort, or unless one of the two leaves meets the requirements of 94 (4) (a) [Door width].

(ii) Side-hung doors

To facilitate wheelchair maneuver, doors should be hung with the hinges in room corners. Doors opening out into corridors or circulation spaces should be avoided as far as possible.

(iii) It is recommended that all doors have kick plates extending from the bottom of the door to at least 400mm from the floor, or be made of a material and finish that would safely withstand the abuse they might receive from canes, crutches, wheelchair foot platforms, or wheelchair wheels.

(b) Wheelchair Maneuvering Space

To enable wheelchair users to approach doors maneuvering space is needed as shown in the Fig.5. A corridor should have a width of at least 1200 mm to allow a 90° turn to be made through a door. In narrow spaces sliding doors may be preferable.

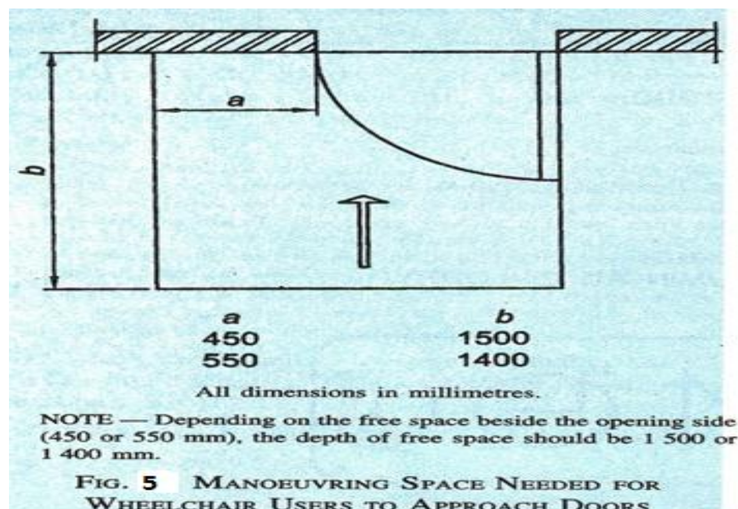


FIG. 5 MANOEUVRING SPACE NEEDED FOR WHEELCHAIR USERS TO APPROACH DOORS

(c) Threshold

Raised thresholds should be avoided, but where this is not possible, their height should not exceed 25mm, Rubber thresholds are advantageous for wheelchair users.

(i) Care should be taken in the selection, placement and setting of door closers so that they do not prevent the use of doors by the physically disabled. Time-delay door closers are recommended.

(ii) Self–Closing doors

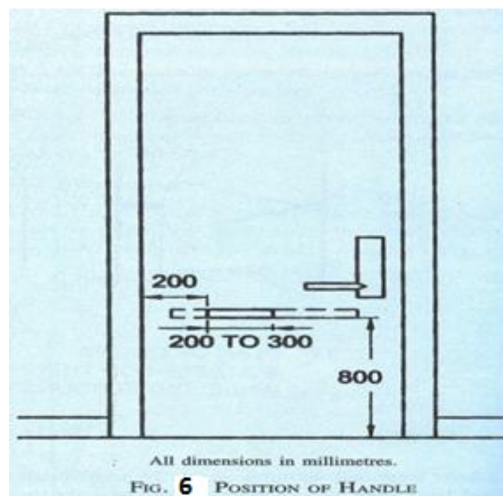
Wheelchair user and other with impaired mobility have difficulty in using self–closing doors. The force required to open them should be reduced as for as possible. Public buildings should preferably have sliding automatic doors.

(d) Door Identification

To help people with impaired vision to see doors, the door and frame should be in a colour which contrasts with the adjoining wall. Glass or glazed doors should be marked with a coloured band or frame a little below eye-level.

(e) Handles

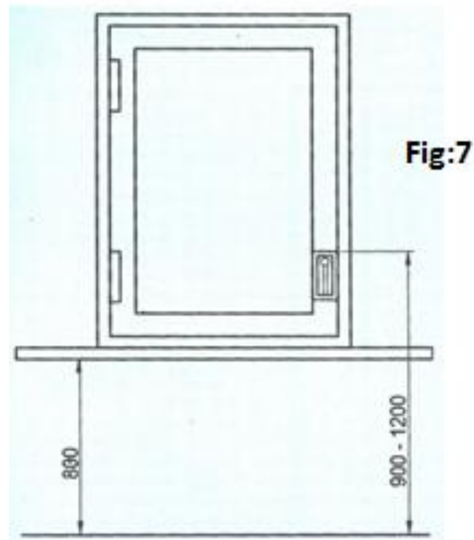
Door handles and locks should be easy to manipulate. To facilitate the closing of a door by wheelchair users (for example, a water closet compartment), the door should have a horizontal handle approximately 800mm from the floor. Self–closing doors should be equipped with an easy gripped vertical pull-handle with a length of at least 300mm, and with and the lower end approximately 800mm above floor. For many people and especially those with impaired vision, it is helpful to make clear whether doors are to be pulled or pushed.



All dimensions in millimetres.
FIG. 6 POSITION OF HANDLE

(f) Windows

Windows should be designed to avoid the glare which is a particular problem for people with impaired vision. Large glass areas close to circulation spaces should be marked a little below eye-level with a coloured band or frame. To enable wheelchair users to see through a window comfortably, the sill should be easy to open and close. Their controls should be placed in the zone 900 to 1200mm from floor (see Fig.7)



(5)Stairs

Stairs should not be the only means of moving between floors. They should be supplemented by lifts or ramps.

(a) Straight flights of steps are preferred by ambulant disabled people. Treads should be approximately 300 mm deep and risers not higher than 150mm. Steps should be of a consistent height and depth throughout the stair. Projecting nosing and open stairs should be avoided to minimize the risk of stumbling.

(b) Handrails should be provided to both sides of any stairway. They should be continuous and extend not less than 300 mm beyond the top and bottom step (otherwise it is difficult for the disabled to use the rail at the first and last step. See Fig 8).

(c) For people with impaired vision, there should be a colour contrast between landings, and top and bottom steps of a flight of steps, or the front edge of each step should have a contrasting colour.

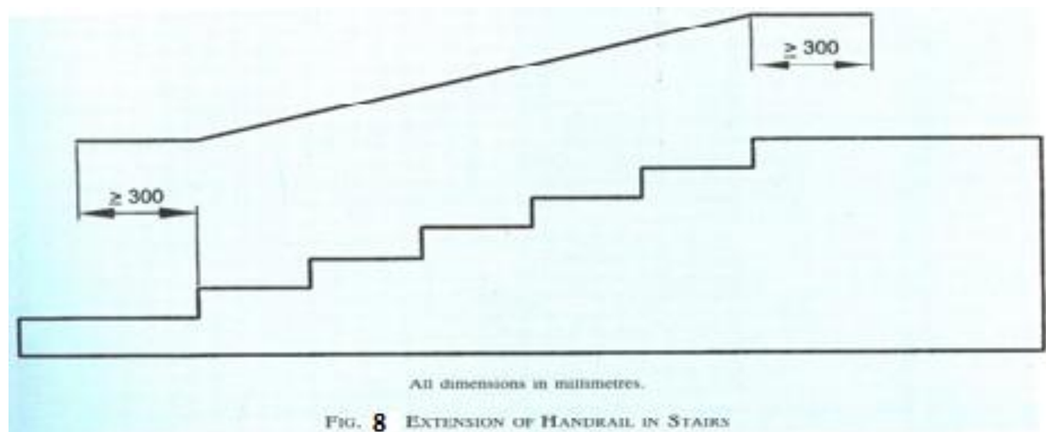


FIG. 8 EXTENSION OF HANDRAIL IN STAIRS

(6)Floors

(a) Floors shall have a non-slip surface.

(b) Floors on a given storey shall be of a common level throughout or be connected by a ramp in accordance with [Ramps and gradients] 94 (1) (a) to 94 (1) (h).

   (i) A gentle slope up to 10mm may be given between the level of the floor of the corridor and the level of the floor of the toilet rooms.

   (ii) There should not be a difference between the level of the floor of a corridor and the level of a meeting room, dining room, or any other room, unless proper ramps are provided.

(7) Refuge

An alternative to immediate evacuation of a building via staircases and/or lifts is the movement of disabled persons to areas of safety (refuge area) within a building. If possible, they could remain there until the fire is controlled and extinguished or until rescued by the fire fighters.

(a) It is useful to have the provisions of a refuge area, usually at the fire protected stair landing on each floor that can safely hold one or two wheelchairs.

(b) Have Doorways with clear opening width of 900 mm and regular compliance.

(c) Have an alarm switch installed between 900mm and 1200mm from floor level.

(8) Sanitary Facilities

It is essential that sanitary facilities, in accordance with the nature and use of a specific building or facility, be made accessible to and usable by, the differently-abled.

(a) Sanitary facilities shall have space to allow traffic of individuals in wheelchairs (see Fig.9 and 10)

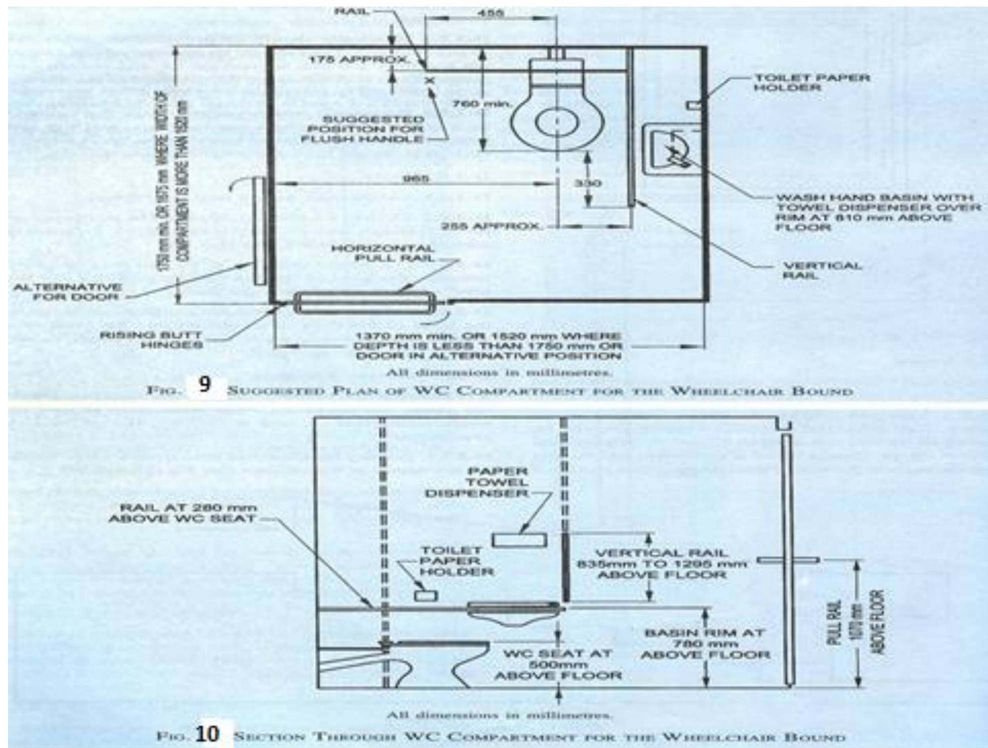


Fig. 9 Suggested Plan of WC Compartment for the Wheelchair Bound

Fig. 10 Section Through WC Compartment for the Wheelchair Bound

(b) Sanitary facilities shall have at least one water-designs demand, so that they are usable by individuals closet cubical for the ambulant disabled (see Fig.11 in wheelchairs and 12), that

(i) is 900 mm wide;

(ii) is at least 1500 mm, preferably 1600 mm deep;

(iii) has a door (where doors are used), that is, 900mm wide and swings out;

(iv) has handrails on each side, 780 mm high and parallel to the floor, 50 mm clearance between rail and wall, and fastened securely at ends and centre;

(v) has a water-closet with the seat 500 mm from the floor.

Note: The design and mounting of the water-closet is of considerable importance. A wall-mounted water closet with a narrow understructure that recedes sharply is most desirable. If a floor mounted water-closet must be used, it should not have a front that is wide and perpendicular to the floor at the front of the seat. The bowl should be shallow at the front of the seat and turn backwards more than downwards to allow the individual in a wheelchair to get close to the water-closet with the seat of the wheelchair.

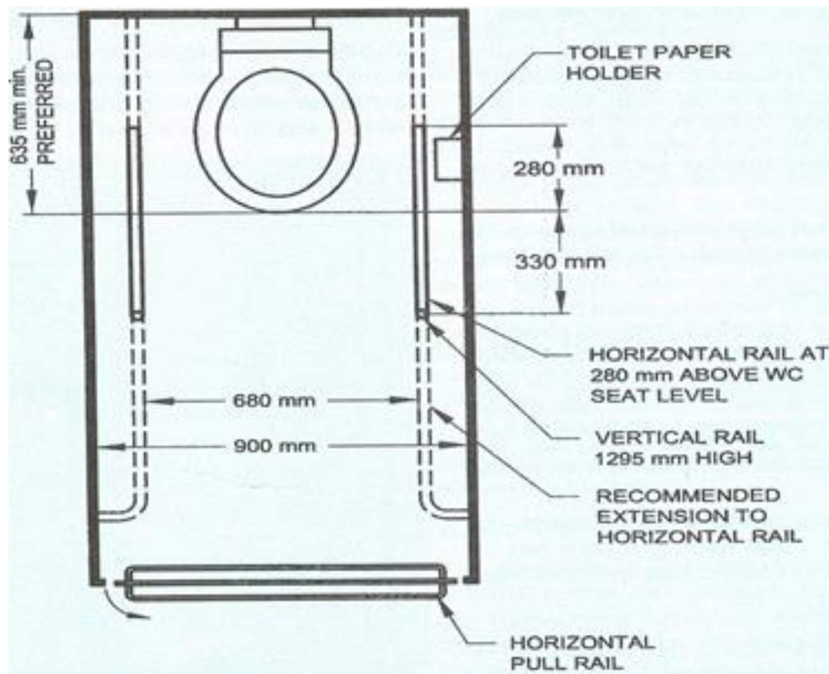


FIG.11 SUGGESTED PLAN WC COMPARTMENT FOR THE AMBULANT

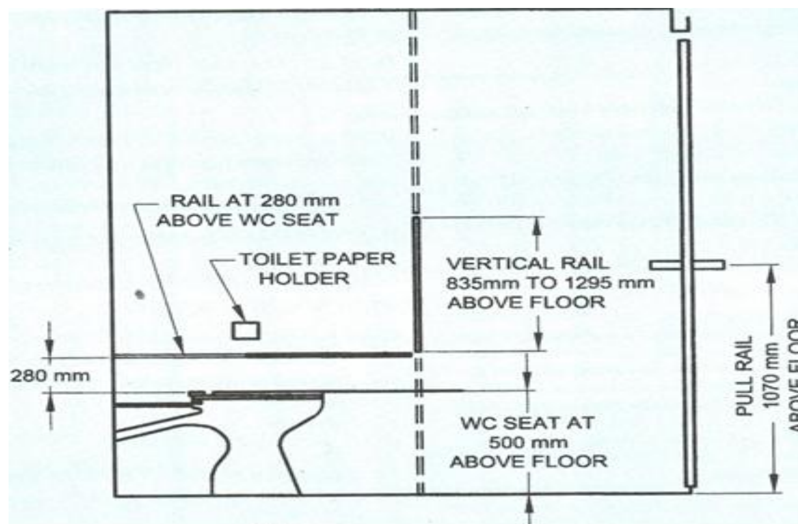


Fig:12

(c) Sanitary facilities shall have wash basins with narrow aprons, which when mounted at standard height are usable by individuals in wheelchair or they shall have wash basins mounted higher, when particular designs demand, so that they are usable by individuals In wheelchair.

(d) The drain pipes and hot-water pipes under a sanitary appliance that be covered or insulated so that a wheelchair individual do not find it inconvenient.

(e) Some mirrors and shelves shall be provided above the wash basins at a height as low as possible as and not higher than 1m above the floor, measured from the top of the shelf and the bottom of the mirror.

(f) Sanitary facilities for men shall have wall mounted urinals with the

opening of the basin 460mm from the floor, or shall have floor-mounted urinals that are on level with the main floor of the toilet room.

(g) Toilet rooms shall have an appropriate number of towel racks, towel dispensers, and other dispensers and disposal units mounted not higher than 910 mm from the floor.

(9)Drinking Fountains

An appropriate number of drinking fountains or other:

(a) Drinking water fountains or water coolers have wash basins mounted higher, when particular shall have up front spouts and control.

(b) Drinking water fountains or water coolers shall be hand-operated, or hand and foot-operated.

(i) Conventional floor mounted water coolers may be convenient to individuals in wheelchairs if a small fountain is mounted on the side of the cooler 800 mm above the floor.

(ii) Fully recessed drinking water fountains are not recommended.

(iii)Drinking water fountains should not be set into an alcove unless the alcove is wider than a wheelchair.

(10) Public Telephones

An appropriate number of public telephones should be made accessible to and usable by the physically disabled.

Note: The conventional public telephone booth is not usable by most physically disabled individuals. There are many ways in which public telephones may be made accessible and usable. It is recommended that architects and builders confer with the telephone companies in the planning of the building or facility.

(a) Such telephones should be kept so that the dial is placed at minimum 1200mm from floor and the handset may be reached by individuals in wheelchairs.

(11) Handrails

(a) Handrails are used as a vocational and mobility aid by blind and visually impaired people and as a support for people with mobility impairments. The handrail should be securely fitted to the wall to withstand heavy pressure. Handrails should turn in towards the wall at either end.

(b) Handrails should be approximately 900mm from the floor. The rail should be easy to grip, having a circular section with a diameter of approximately 40 mm and fixed as shown in Fig: 13.

(c) To aid identification, the color of the rail should contrast with the wall behind.

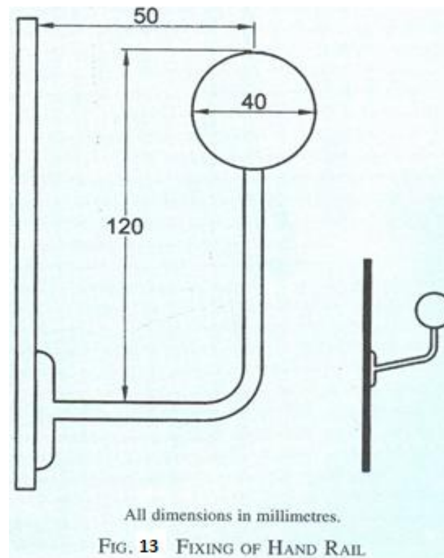


FIG. 13 FIXING OF HAND RAIL

(12) Elevators

In a multi-storey building, elevators are essential to the successful functioning of physically disabled individuals. They shall conform to the requirements given below.

(a) Elevators shall be accessible to, and usable by the physically disabled on the level that they use to enter the building, and at all levels normally used by the general public.

(b) Elevators shall allow for traffic by wheelchairs (see also 94 (4) (Doors and doorways)).

(c) Provision of at least one lift shall be made for the wheel chair user with the following cage dimensions of lift recommended for passenger lift of 13 person's capacity of Bureau of Indian Standards.

Desirable Lift size	
Clear internal width	1100 mm
Clear internal width	2000 mm
Entrance door width	900 mm

(d) A hand rail not less than 600mm long at 1000mm above floor level shall be fixed adjacent to the control panel.

(e) The lift lobby shall be of an inside measurement of 1800 mm x 1800 mm or more.

(f) The time of an automatically closing door should be minimum 5 seconds and the closing speed should not exceed 0.25 m/sec.

(g) The interior of the cage shall be provided with a device that audibly indicates the floor, the cage has reached indicates that the door of the cage of entrance/exit is either open or closed.

(13) Controls

It is advantageous for wheelchair users if controls are placed at low level. For visually impaired people, they should be at eye-level.

(a) To enable wheelchair users to reach controls while not placing them too low for visually impaired people, controls should be in the zone $00mm to 1200mm from the floor. It is advantageous if controls in, for example, lifts are placed at an angle of approximately 45° to the wall so that they are easier to read and operate. To cater for wheelchair users, controls should be placed not less than 400mm from room comers. All the power and electric points should be placed at one metre above the floor level and should not project outside walls.

(b) Again, to cater for visually impaired people, controls should be colour-contrasted with backgrounds. Information should preferably be in relief for tactile reading.

(c) To aid operation for people with impaired co-ordination or impaired vision, switches, etc, should have large push plates.

(d) Controls for powered door openers to hinged doors should be located so that the doors do not conflict with wheelchairs, sticks, walking aids, etc.

(e) To facilitate operation for people with limited strength in arms and hands, handles should be easy to grip and turn.

(14) Identification

Appropriate identification of specific facilities within a building used by the public is particularly essential to the blind.

(a) Raised letters or numbers shall be used to identify rooms or offices.

(b) Such identification should be placed on the wall, to left of the door, preferably at a height of 1500mm from the floor.

(c) Doors that are not intended for normal use, and that might prove dangerous if a blind person were to exit or enter by them, should be made quickly identifiable to the touch by knurling the door handle or knob (see Fig. 14).

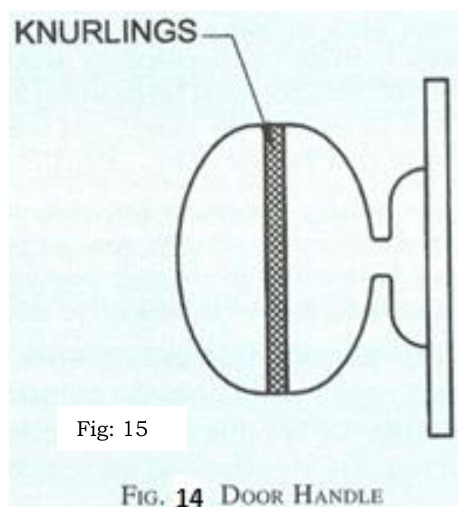


Fig: 15

FIG. 14 DOOR HANDLE

(15) Warning Signals & Proper signage

(a) Audible warning signals shall be accompanied by simultaneous visual signals for the benefit of those with hearing disabilities.

(b) Visual signals shall be accompanied by simultaneous audible signals for the benefit of the blind. To assist blind people, lettering and symbols on signs should be in relief for tactile reading and the information board in brail should be installed on the wall at a suitable height and it should be possible to approach them closely.

(c) Signs should be designed and located so that they are easy to read. For visually impaired people, signs should preferably be at eye-level and it should be possible to approach them closely. Text and symbols should be color-contrasted with the background. The letters should not be less than 20mm high.

(d) Signs should be well illuminated and surfaces should not cause mirroring or reflections. Signs should not be behind glass or similar materials.

(e) Information based on colour codes only should be avoided; colorblind people may find them difficult to understand.

(f) Public Address system may also be provided in busy public areas.

(g) To ensure safe walking, there should not be any protruding sign which creates obstruction in walking.

(h) International Symbol Mark for wheel chair be installed in a lift, toilet, staircase, parking areas, etc., that have been provided for the handicapped.

(16) Work Bench

This should be at least 800 mm wide, 600 mm deep and 650 mm to 700 mm high. For wheelchair users, the convenient height of work tops is between 750 mm and 850 mm; flexible provision is preferred. Further, for wheelchair access to a work bench, wash basin or table, a clear space for knees and footrests is needed.

(17) Hazards

Every effort shall be exercised to obviate hazards to individuals with physical disabilities.

(a) Access panels or manholes in floors, walks, and walls may be extremely hazardous, particularly when in use, and should be avoided.

(b) When manholes or access panels are open and in use, or when an open excavation exists on a site, particularly when it is in proximity of normal pedestrian traffic, barricades shall be placed on all open sides, at least 8.5 m from the hazard and warning devices shall be installed in accordance with 94(15) (b).

(c) Low-hanging door closers that remain within the opening of a doorway, when the door is open or that protrude hazardously into regular corridors or traffic ways when the door is closed, shall be avoided.

(d) Low-hanging signs, ceiling lights, and similar objects or signs and fixtures that protrude into regular corridors or traffic way shall be

avoided. A minimum height of 2.1m measured from the floor is recommended.

(e) Ramps shall be adequately lighted.

(f) Exit signs shall be in accordance with good practices.

(g) Equipment and materials causing allergic reactions should as far as possible be avoided in dwellings and buildings.

95. Designing for Children

The dimensions given above are for adults of average stature. In designing buildings for use by children, it may be necessary to alter some dimensions, such as, height of handrails, in accordance with accepted standards.

96. Additional Information

For additional information regarding other facilities and conveniences required in buildings meant for use of differently abled, reference may be made to accepted standards.

[Refer: 1. Guidelines and space Standards for Barrier Free Built Environment for Disabled and Elderly Persons, 1998, CPWD, Government of India.

2. Hand Book on Barrier Free and Accessibility, 2014, CPWD, Government of India. URL:*http://cpwd.gov.in*).

3. Part – III, Annexure – D, (Cause 12.21) of NBC-2005 – Special Requirement for Planning of Public Buildings meant for use of Physically Challenged.]

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CHAPTER-X-3

PROVISIONS FOR CONSTRUCTION AND REGULATION OF MULTIPLEX COMPLEXES

97. Definitions:

(1) "Multiplex complex" means an integrated entertainment and shopping center/complex or a shopping mall and having at least three (3) cinema halls/screens. Apart from Cinema Halls, the entertainment area may have restaurants, cafeteria, fast food outlets, video games parlors, pubs, bowling alleys, health spa/centers, convention centers, hotels and other recreational activities. Active floors like I.T offices shall be allowed in Multiplexes. However, habitable areas like hotels, service apartments shall not be allowed in the same block where the Multiplexes are set up and shall be allowed only as a separate block. Such a Complex may be spread over the site or be in one or more blocks which may be high-rise buildings or normal buildings.

(2) 'Approving Authority for Multiplex Complexes':

S. No.	Location of the Proposed Multiplex Complex	Approving Authority
(A)	(B)	(C)
1	Municipal Corporation	Commissioner of Municipal Corporation
2	Other Than Municipal Corporation located in Development Authority Areas	Vice-Chairman of the Respective Development Authority
3	Other Than Municipal Corporation located in Other Than Development Authority Areas	Respective Commissioner of the Local Body Subject to Obtaining Prior Technical Approval of The Director of Town & Country Planning.

(3) "Licensing Authority: means the licensing authority under the Andhra Pradesh Cinemas (Regulation) Act, 1955 and rules made there under for issuing licenses for cinema theatres in the Multiplex Complex.

(4) Words, expressions and definitions not defined herein shall have the same meaning as given in the National Building Code of India, 2005.

98. Applicability of Andhra Pradesh Cinemas (Regulation) Act, 1955 and Rules made there under:

Provisions of the Andhra Pradesh Cinemas (Regulation) Act, 1955 shall be strictly adhered to. The Andhra Pradesh Cinema (Regulation) Rules 1970 shall apply to the multiplex complex as a whole and not limited to the individual cinema halls within it. The provisions of the Andhra Pradesh Cinema (Regulation) Rules 1970 are deemed to be relaxed to allow activities mentioned in the definition of Multiplex.

99. Redevelopment of existing cinema halls into Multiplex Complex:

Conversion of existing cinema hall to multiplex complex is allowed subject to complying with the requirements given hereunder.

100. Site Requirements for Multiplex Complexes:

(1) The minimum size of plot for a Multiplex shall be 3000sq. m.
(2) The site shall abut to an existing road whose width shall be not less than 18m.
(3) The abutting road has to be black-topped with minimum 2 lane carriageway. Service roads are required for sites abutting 30m and above roads and approach shall be allowed only through service road. The width of the service road shall be minimum 7m with minimum 2 lane black topped carriageway and shall be undertaken by the owners of such buildings to the extent of the width of their site.

101. Location Criteria:

(1) The location criteria of a Multiplex Complex shall be the same as given in the Andhra Pradesh Cinemas (Regulation) Act, 1955 and in addition to this, it shall comply with Clause 3.2 of Part 4 of National Building Code (wherever applicable).

(2) Where zoning regulations of a statutory Plan/Scheme are in force, the location of multiplex complex shall be governed as per such zoning regulations.

(3) Multiplex complex may be permitted in a zone or scheme declared as tourism zone/area along with other recreational facilities.

(4) Multiplex Complex shall not be allowed in

(a) Congested areas;

(b) Settlement areas/Abadi/Gram khantam areas;

(c) Areas restricted for High-rise buildings;

(d) Abutting to major road junctions of above 18m wide;

(e) Pure residential areas/localities.

(5) Government may by Notification, declare certain roads/areas in any APCRDA/MRDA/UDA/ULB area where Multiplex Complex shall not be allowed.

102. Documents to be submitted:

In addition to the documents required to be submitted for sanction of building permission of High rise building, the following are also mandatory to examine the Multiplex Complex Application.

(1) Prior No Objection Certificate shall be submitted from the Airport Authority of India (if applicable).

(2) Prior No Objection Certificate shall be submitted from the Director General of Disaster Response and Fire Services Department. The fire safety requirements

shall be duly certified by a fire engineer.

(3) Prior No Objection Certificate from the Police Department [Traffic] shall be submitted.

(4) Traffic Impact Study Report and Traffic Management Plan for the proposed Multiplex Complex prepared by a qualified Traffic Engineer shall be submitted along with application.

103. Building Requirements:

(1) Every application to construct or reconstruct a Multiplex Complex shall be made in the prescribed form and accompanied by detailed plans and floor plans of all floors drawn by a registered architect, along with complete set of structural drawings and detailed specifications duly certified by a qualified structural engineer.

(2) The building bulk, coverage and height shall be governed by the minimum all-round setbacks to be left, the organized open spaces to be left and the height restrictions imposed by the Airport authority (if applicable)/Defense authorities (if applicable) and Fire Services Department and the Area-level Impact fee on built up area required to be paid, as applicable.

(3) The maximum height of the block/portion wherein the Multiplex screens are set up shall not exceed 30m;

(4) In case of sites located in Gram Panchayat areas and outside Development Authority areas, the maximum height of all blocks permissible shall be 30m;

(5) In case of two or more blocks in the same site, the space between the two blocks shall be as given in Column (D) of the Table given below;

(6) For heights of blocks above 30m and up to 45m, the minimum abutting road width shall be 24m while for blocks of height above 45m, the minimum abutting road width shall be 30m.

(7) The minimum all-round setbacks for a multiplex Complex shall be as follows.

(8) No relaxation in the minimum all-round setbacks or transfer of setbacks shall be allowed.

TABLE - 23

Minimum all-round setbacks for a Multiplex Complex

S. No.	**Height of the Building** (m)	**Minimum front open space** (m)	**Minimum open space on remaining sides** (m)
(A)	**(B)**	**(C)**	**(D)**
1	Up to 15	12	6
2	Above 15m & Up to 21m		7

3	Above 21m & Up to 24m		8
4	Above 24 m & up to 27m		9
5	Above 27m & Up to 30m		10
6	Above 30m & up to 35m		11
7	Above 35m & Up to40m		12
8	Above 40m & up to 45m	13	13
9	Above 45m & up to 50m	14	14
10	Above 50m	15	16

104. Construction requirements:

(1) The building requirements, building services, specifications and standards specified in the National Building Code, 2005 shall be complied with.

(2) Construction of such buildings shall be undertaken by owners by engaging registered architect, licensed builder, fire engineer and licensed structural engineer.

(3) The designs and building plans shall be countersigned by the owner, licensed builder, registered architect, licensed engineer, qualified & licensed structural Engineer and a fire engineer who shall be responsible for the supervision, structural safety, fire safety and compliance of the specifications for such buildings.

(4) Buildings shall be designed for earth quake resistance and resistance for other natural hazards. The Completion Certificate obtained from the Licensed Technical Personnel shall mention that the norms have been followed in the design and construction of buildings for making the buildings earthquake resistant, compliance with structural safety and fire safety requirements as per the relevant provisions of National Building Code & Andhra Pradesh Fire Service Act, 1999.

(5) The exit and fire safety requirements shall be in accordance with Part IV of National Building Code of India. The fire safety measures shall be undertaken by engaging the services of a fire protection engineer.

(6) The following minimum Fire Fighting Installations are to be provided as per Table 23, Part - 4 of National Building Code of India, 2005:

TABLE - 24

Fire Fighting Installations

Sl. No.	Fire Fighting Installation
(A)	**(B)**
1	Fire Extinguishers as per IS 2190
2	Hose reel
3	Wet riser
4	Yard hydrant
5	Automatic sprinkler system in entire Building
6	Automatic detection and alarm system in entire Building (except Cellars)
7	Manually operated electrical alarm system in entire Building (except Cellars)
8	Underground static water tank of 2,00,000 Liters capacity
9	Terrace tank of 20,000 Liters capacity
10	Two Electrical Main pumps of 2850 LPM capacity
11	Diesel pump (Standby of 2850 LPM capacity
12	Electric Jockey pump of 180 LPM capacity

(7) The work of other building services like sanitation, plumbing, lifts, electrical installations, and other utility services shall as per National Building Code standards and shall be executed under the planning, design and supervision of qualified and competent technical personnel.

(8) The means of escape shall be provided as per the Clause 4 (Exit Requirements), Part 4 of National Building Code of India.

TABLE - 25

Means of escape and Exit Requirements for Multiplex Complex

S. No.	Item	Clause of Part 4 of NBC
(A)	**(B)**	**(C)**
1	Capacities of Exists	4.4
2	Arrangement of Exits	4.5
3	Number of Exits	4.6
4	Doorways	4.7
5	Corridors and Passageways	4.8

6	Internal Staircases	4.9
7	Pressurization of Staircases	4.10
8	External Staircases	4.11
9	Horizontal Exits	4.12
10	Fire Tower	4.13
11	Ramps	4.14
12	Fire Lift	4.15
13	Emergency and Escape Lighting	4.16
14	Illumination of Means of Exit	4.17
15	Fire Detection and Warning	4.18

(9) Smoke Management

The following measures are to be provided to prevent the spread of smoke easily to the other floors, which may affect the life safety of the occupants, particularly, the Cinema viewers:

(a) For Types 1 to 3 constructions as given Clause 3.3 in the National Building Code (Part-IV), a doorway or opening in a separating wall on any floor shall be limited to 5.6sq.m in area with a maximum height/width of 2.75m. Every wall opening shall be protected with fire-resisting doors having the fire rating of not less than 2 h in accordance with accepted standard [4(7)]. All openings in the floors shall be protected by vertical enclosures extending above and below such openings, the walls of such enclosures having a fire resistance of not less than 2 h and all openings therein being protected with a fire resisting assembly as specified in clause 3.4.8 & 3.4.9 of Part-4 of NBC.

(b) Openings in walls or floors which are necessary to be provided to allow passages of all building services like cables, electrical wirings, telephone cables, plumbing pipes, etc, shall be protected by enclosure in the form of ducts/shafts having a fire resistance not less than 2 h . The inspection door for electrical shafts/ducts shall not be less than2 h and for other services shafts/ducts, the same shall have fire resistance not less than 1 h. Medium and low voltage wiring running in shafts/ducts, shall either be armored type or run through metal conduits. Further, the space between the conduits pipes and the walls/slabs shall be filled in by a filter material having fire resistance rating of not less than 1 h as per clause 3.4.8.3 of Part-4 of National Building Code.

(c) Openings in separating walls and floors-Attention shall be paid to all such factors as will limit fire spread to these opening and maintain fire rating of the structural member. Every wall opening shall be protected with Fire resisting doors having fire rating of not less than two hours. All openings in the floors shall be protected by vertical enclosures extending above and below such openings, the wall of such enclosures having a fire resistance of not less than two hours and all openings therein being protected with a fire resisting assembly as per Clause 3, 4, 8, Part 4 of National Building Code of India, 2005.

(d) Every vertical opening between the floors shall be suitably enclosed or protected, as necessary to provide the following:

(i) Reasonable safety to the occupants while using the means or egress by preventing spread of fire, smoke, or fumes through vertical openings from floor to floor to allow occupants to complete their use of the means of egress. Further it shall be ensured to provide a clear height of 2100 MM in the passage/escape path of the occupants.

(ii) Limitation of damage to the building and its contents (Clause 3.4.8.4) Part-4 of National Building Code of India, 2005.

(e) Where openings are permitted, they shall not exceed three-fourths the area of the wall in the case of an external wall and they shall be protected with fire resisting assemblies or enclosures having fire resistance equal to that of the wall or floor in which these are situated. Such assemblies and enclosures shall also be capable of preventing the spread of smoke or fumes through the openings so as to facilitate the safe evacuation from the building in case of fire.

(f) Air conditioning and ventilating systems

(i) Air conditioning and ventilating systems shall be so installed and maintained as to minimize the danger of spread of fire, smoke or fumes from one floor to other or from outside to any occupied building or structure (Clause 3.4.11.1) Part 4 of National Building Code of India 2005.

(ii) Air-conditioning and ventilating systems circulating air to more than one floor or fire area shall be provided with dampers designed to close automatically in case of fire and thereby preventing spread of fire or smoke and shall be in accordance with the accepted standard (4(10). Such a system shall also be provided with automatic controls to stop fans in case of fire, unless arranged to remove smoke from a fire, in which case these shall be designed to remain in operation.

(iii) Effective means for preventing circulation of smoke through the A C system in case of fire in air filters or from other sources drawn into the system, and shall have smoke sensitive devices for actuation in accordance with the accepted standards (Clause 3.4.11.3) Part 4 of National Building Code of India 2005.

(iv) Separate air handling units for each floor shall be provided to avoid the hazards arising from spread of fire and smoke through air conditioning ducts (Clause 3.4.11.4) Part 4 of National Building Code of India 2005.

(v) Fire Dampers shall be provided in the AC system in accordance with the accepted standards designed so as to close automatically in case of fire and thereby preventing spread of fire or smoke.

(g) Pressurization of stair cases shall be done as per Clause 4.10, Part 4 of National Building Code of India 2005.

(h) Provision of pressurized lift lobby with self-closing smoke stop doors of 2 hour Fire resistance, one in the lift lobbies of all the cellars.

(i) Smoke venting facilities for safe use of exits shall be provided as per Clause

3.4.12, Part 4 of National Building Code of India 2005.

(j) Basement ventilation shall comply to Clause C 1.6 of Annexure-C of Part 4 of National Building Code of India, 2005.

105. Parts of the Building requirements

The parts of the Building requirements shall conform to National Building Code of India, 2005 with regard to:

(1) Materials:

Flame retardant material only should be made use for interior decoration and upholstery to prevent generation of toxic smoke/flames. The surface interior finishes shall comply as per Clause 3.4.15, Part 4 of NBC of India 2005.

(2) Compartmentation:

(a) The Building shall be suitably compartmentalized so that Fire/Smoke remained confined to the area where Fire Incident has occurred and does not spread to the remaining part of the Building as per Clause C - 9, Annexure "C" Part 4 of National Building Code of India, 2005.

(b) Fire doors with 2 hour fire resistance shall be provided at appropriate place along the escape route and particularly at the entrance to the lift lobby and stair well to prevent spread of fire and smoke as per Clause 4.2.9, Part 4 of National Building Code of India 2005.

(c) In Multiplexes, large inter floor openings may be there, in which conventional compartmentation may be difficult. In such case, special compensative measures are required as per reputed Standards. (eg. NFPA, 1992).

(3) Fire Lift:

Fire lifts complying with Clause C 1.5 Q of Annexure-C of Part 4 of National Building Code of India 2005 shall be provided.

(4) Emergency Lighting:

Illumination of means of exit in stair case and corridors shall comply with Clause C.1.14 of Annexure-C, Part 4 of National Building Code of India 2005.

(5) Fire Officer:

Qualified Fire Officer with experience of not less than 3 years shall be appointed who will be available on the premises as per Clauses C 6, Annexure-C, and Part - 4 of National Building Code of India 2005.

(6) Building Evacuation Supervisor: Appointment of Building Evacuation Supervisor as per Annexure “E” part 4 of National Building Code of India, 2005 for conducting periodical Fire Drills and to ensure safe evacuation in **case of any emergency.**

106. Seating arrangements in theatres:

(1) The seating arrangements shall conform to the Exit facilities as per Clause 6.4.4, Part-4 of National Building code of India, 2005.

(2) Notwithstanding (a) above, the distance between the screen and the first front row of seats shall not be less than the height of the screen or the top

picture height of the screen

107. Parking requirements

(1) The parking requirements within the site shall be as follows:

TABLE - 26
Parking requirements for Multiplex Complex

Type of Building	Parking area to be provided as percentage of total built up area (inclusive of all internal aisles, driveways, stairs, etc.)	
	In Municipal Corporation areas	In other areas
(A)	(B)	(C)
Multiplex Complexes (inclusive of all activities areas)	60%	50%

(2) The parking spaces may be provided in:

(a) basements or cellars or

(b) on stilt floor or

(c) in the open space over and above the minimum required setbacks (except the front setback) to be left around the building with adequate vehicular access, aisle, drives, ramps required for maneuvering of vehicles.

(d) Multi-Level Parking Complex [MLPC] adjoining to the complex within the site may be considered provided that a minimum clear open space of 6 m from the site boundary is ensured.

108. Landscaping and greenery:

(1) A minimum 2 m wide green planting strip in the periphery on all sides within the setbacks are required to be developed and maintained

(2) In addition to (a) above, an organized open space of at least 10 % of total site area shall be maintained and utilized as greenery over and above the mandatory alround setbacks. This could be part of the interior open space or be in one or more pockets.

(3) The landscaping and greenery shall be undertaken as per the guidelines given in the National Building Code and subject to provision of hard and motorable leveled ground to facilitate operation of Hydraulic Platform.

(4) Trees shall be planted within the periphery of the site at the rate of 1 tree per 100 sq m of site area.

109. City/Area Level Impact Fee Payable:

(1) In addition to the building permit fees and other charges payable, City Area level impact fee shall be payable for height of floors above 15m where the height of the building or block is more than 15m at the following rates;

TABLE – 27
City/Area Level Impact Fee Payable for Multiplex Complex

S. No.	Height	Rate in Rs. Per sq. m Built up area		
		Greater Visakhapatnam/ Vijayawada Municipal Corporations	Other Municipal Corporations	Other Municipalities & Panchayat areas
(A)	(B)	(C)	(D)	(E)
1	Above15m and Up to 24m	1000	800	500
2	Above 24m and Up to30m	1500	1200	800
3	Above 30m & Up to 50 m	2000	1500	1000
4	Above 50m	2500	2000	1500

(2) While calculating the Impact fee parking areas/blocks are exempted.

(3) The Impact fees so collected by the Sanctioning Authority shall be maintained in a separate escrow account and utilized only for upgrading of infrastructure and services in the area concerned

(4) Fire Precaution Fund: A fee at the rate of Rs 10 per sq. m of built up area shall be payable towards Fire Precaution Fund to the Andhra Pradesh Disasters Response and Fire Services Department.

110. Building Permission to be obtained before commencement of construction:

After obtaining the provisional license and site clearance from the Licensing Authority as required under the Andhra Pradesh Cinemas (Regulation) Act, 1955 and Rules made there under, the owner/applicant shall obtain necessary building permission from the Sanctioning Authority as the case may be, before commencing the construction.

111. Occupancy Certificate to be obtained:

(1) The final license shall be issued by the Licensing Authority only after the owner/applicant submits a final NOC from the Fire Service department and an Occupancy Certificate in the prescribed format from the Building Approving Authority

(2) For obtaining the Occupancy Certificate, the owner shall submit a notice of completion through the registered architect and licensed builder/developer along with prescribed documents and plans and Final NOC from the Andhra Pradesh Disasters Response and Fire Services Department to the Building Approving Authority. The Building Approving Authority on receipt of such notice of completion shall undertake inspection with regard to the following aspects and shall communicate the approval or refusal of the occupancy Certificate within 15 days.

(h) Number of floors

(i) External setbacks
(j) Parking space provision
(k) Abutting road width
(l) Rain Water Harvesting Structures, as applicable.
(m) Solar roof top structures, as applicable.
(n) Recycle of water treatment plants, as applicable.

112. Maintenance & Management:

Such multiplex complexes shall be under the overall control and management of a single management body who shall be responsible for the public safety, maintenance and public convenience/amenities.

***

CHAPTER-X-4

PROVISIONS FOR CONSTRUCTION AND REGULATION OF HIGH-RISE HOSPITAL BUILDINGS (ABOVE 30M HEIGHT)

113. This Chapter sets out the standard Fire Prevention and Safety Measures for High–rise Hospital Buildings.

114. DEFINITIONS

In these rules, unless the context otherwise requires,

(a) 'Building' means a building intended for the use of a hospital of the height of above 30 meters;

(b) 'Municipal Laws' means,-

(i) The Andhra Pradesh Town Planning Act, 1920.

(ii) The Visakhapatnam Municipal Corporation Act, 1979 in respect of the Visakhapatnam Municipal Corporation.

(iii) The Vijayawada Municipal Corporation Act, 1981 in respect of Vijayawada Municipal Corporation.

(iv) The Andhra Pradesh Municipal Corporation Act, 1994 in respect of the Municipal Corporations;

(v) The Andhra Pradesh Municipalities Act, 1965 in respect of the Municipalities;

(vi) The Andhra Pradesh Urban Areas (Development) Act, 1975;

(vii) The Andhra Pradesh Panchayat Raj Act, 1994 in respect of the Gram Panchayats;

(viii) Andhra Pradesh Capital Region Development Authority Act, 2014;

(ix) Andhra Pradesh Metropolitan Region and Urban Development Authorities Act, 2016;

(c) Words used but not defined in the rules shall have the meaning assigned to in the Municipal Laws and the Andhra Pradesh Fire Service Act, 1999.

115. HEIGHT AND OPEN SPACES

(a) In order to facilitate firefighting operations and also to prevent fire exposure to adjacent buildings, it is essential to have adequate open spaces around the building.

(b) Open spaces around the building shall be as per section 8.2.3.1 Table 2, NBC Part III.

TABLE – 28

HEIGHT AND OPEN SPACES FOR HIGHRISE HOSPITAL BUILDING

Height of the Building (m)	Minimum open space on all sides (in m)
(A)	**(B)**
Above 30 m & up to 35 m	11
Above 35 m & up to 40 m	12
Above 40 m & up to 45 m	13
Above 45 m & up to 50 m	14
Above 50 m & up to 55 m	15
Above 55 m & up to 60 m	16

(c) Minimum 7 meters wide hard leveled motor able open to sky drive-way shall be provided around the building for the movement and operation of specialized fire vehicles e.g. Hydraulic Platform, Turn Table Ladder, etc.

(d) The Maximum permissible height of Hospital Buildings shall be 60 meters.

(e) The height of each floor shall be not less than 4 meters.

(f) No relaxation in the above mentioned open spaces and height, even in case of road widening shall be allowed.

(g) Abutting Road on any side shall not be considered as open space for this purpose.

116. FIRE-RESISTIVE REQUIREMENTS

(a) Exterior Walls, Columns and Beams

(i) Load bearing exterior walls shall be 3 hour fire resistance provided the building is protected with automatic sprinkler system.

(ii) Columns and beams shall be 3 hour fire resistance provided the building is protected with automatic sprinkler system.

(iii) Non-load bearing exterior walls shall be 2 hour fire resistance provided the building is protected with automatic sprinkler system.

(iv) Opening protection, where required, shall correspond to the rating of the exterior wall. The allowable maximum area of exterior wall openings shall be in accordance with IBC Table 704.8.

(b) Interior Walls

(i) Load bearing interior walls shall have minimum 3 hour fire resistance rating provided the building is protected with automatic sprinkler system. They shall be permitted to be reduced to 2 hour fire resistance rated based on compliance with the high-rise provisions in NFPA 5000, Section 33.1.3 as follows:

(1) Exits are constructed as smoke proof enclosures;

(2) Sprinkler control valves with supervisory initiating devices, and water flow initiating devices are provided on each floor; and

(3) There are no areas that exceed the maximum allowable quantities per control area in accordance with NFPA 5000, Section 34.1.3.

(ii) Non-load bearing interior walls shall be permitted to have no fire resistance rating based solely on the specified construction type herein, provided the building is protected with an approved automatic sprinkler system. Interior walls shall be fire resistance rated where required by other provisions in this code.

(c) Separation of Occupancies

(i) Where separated use design is employed and distinct separated occupancies are provided, the health care part of the building shall be separated from other occupancies with 2 hour fire resistance rated barrier construction.

(ii) Other occupancies shall be separated in accordance with NFPA 5000, Section 6.2.3 and 6.2.4.

(d) Protection of Openings

(i) Opening protection, where required, shall be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein.

(ii) Every opening in a fire barrier shall be protected to limit the spread of fire and restrict the movement of smoke from one side of the fire barrier to the other.

(iii) The fire resistance rating for opening protectives in 2-hour rated fire barriers, smoke barriers and smoke partitions shall be a minimum of 1-1/2 hours.

(e) Suites

(i) Corridor walls shall be effective in limiting the transfer of smoke and shall be permitted to terminate at the ceiling where the ceiling is constructed to limit the transfer of smoke.

(ii) The walls shall be 1 hour barrier fire resistance rated in buildings provided with full automatic sprinkler protection.

(iii) Sleeping Suites - The size limit on sleeping suites shall not exceed an area of 460 m2.

Exception: The area shall be permitted not to exceed 700 m2 when the following conditions are met:

Direct visual supervision is provided from a normally attended location within the suite, and,

The patient sleeping room is provided with a total coverage smoke detection system per NFPA 101 Sections 9.6.2.8 and 18.3.4

Non-Sleeping Suites – The size limit shall not exceed 930 m2.

(f) Doors

See section on Exit Corridors – Doors herein.

(g) Miscellaneous Openings

In other than smoke compartments containing patient bedrooms, miscellaneous openings, such as mail slots, pharmacy pass-through windows, laboratory pass-through windows, and cashier pass-through windows, shall be permitted to be installed in vision panels or doors without special protection, provided that both of the following criteria are met:

(1) The aggregate area of openings per room does not exceed 80 in.2 (0.05 m2).

(2) The openings are installed at or below half the distance from the floor to the room ceiling.

(h) Transfer Grilles

Transfer grilles are not permitted in walls or doors of suites, regardless of whether or not they are protected by fusible link-operated dampers.

Exception: Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall be permitted to have ventilating louvers or to be undercut.

(i) Exit Access Corridors

(i) Walls

(1) Corridor walls shall form a barrier to limit the transfer of smoke and shall be permitted to terminate at the ceiling where the ceiling is constructed to limit the transfer of smoke. The walls shall be 1 hour fire rated provided the building is protected with automatic sprinkler system. The exceptions are as follows:

(2) <u>Exception No. 1:</u> Such spaces may be unlimited in size and open to the corridor where the following are met:

(a) The spaces are not used for patient sleeping rooms, treatment rooms, or hazardous areas.

(b) The open space is protected by an electrically supervised, automatic smoke detection system, or the entire space is arranged and located to permit direct supervision by the facility staff from a nurses' station or similar space.

(c) The corridors onto which the spaces open in the same smoke compartment are protected by an electrically supervised, automatic smoke detection system, or the smoke compartment in which the space located is protected throughout by quick response sprinklers.

(d) The space does not obstruct access to required exits.

(3) Exception No. 2: Waiting areas and similar spaces shall be permitted to open to corridors without opening protection provided the following are met:
   (a) The aggregate waiting area in each smoke compartment does not exceed 55.7 m2.
   (b) Each area is protected by an electrically supervised, automatic smoke detection system, or each area is arranged and located to permit direct supervision by the facility staff from a nurses' station or similar space; and
   (c) The area is arranged not to obstruct access to required exits.

(4) Exception No. 3: This requirement shall not apply to spaces for nurses' stations.

(5) Exception No. 4: Gift shops not exceeding 46.45 m2 in area shall be permitted to open to a corridor or lobby without opening protectives, provided the building is protected throughout by an approved automatic sprinkler system.

(ii) Doors

Corridor doors in fully sprinkled buildings shall be 3/4-hour fire resistance rated with positive latching, and shall be effective in limiting the transfer of smoke. They shall comply with NFPA 101, Section 18.2.2.2. Roller latches shall not be permitted. Door closing devices shall not be required on doors in corridor wall openings other than those serving required exits, smoke barriers, enclosures of vertical openings, and hazardous areas.

(iii) Glazing

Vision panels consisting of fire rated glazing or wired glass panels in approved frames shall be fire rated in accordance with the provisions for opening protection and shall be smoke-tight. Glazing in fire rated assemblies shall also comply with NFPA 101, Section 8.3.3.

Fire window assemblies shall not be permitted in fire barriers having a fire resistance rating of 2 hours or greater (see NFPA 5000, Table 8.7.2).

(iv) Elevator Lobbies

Elevator lobbies shall be required on every floor and shall be enclosed by smoke partition walls having a minimum fire resistance rating of 1-hour.

(1) Exception No. 1: Elevator lobbies are not required at the street floor protected with an automatic sprinkler system.

(2) Exception No. 2: Elevator lobbies are not required where elevators are not required to be located in a shaft enclosure.

(3) Exception No. 3: Enclosed elevator lobbies are not required where the elevator hoist way is pressurized.

(v) Miscellaneous Openings

In other than smoke compartments containing patient bedrooms, miscellaneous openings, such as mail slots, pharmacy pass-through windows, laboratory pass-through windows, and cashier pass-through

windows, shall be permitted to be installed in vision panels or doors without special protection, provided that both of the following criteria are met:

(1) The aggregate area of openings per room does not exceed 80 in.2 (0.05 m2).
(2) The openings are installed at or below half the distance from the floor to the room ceiling.

(vi) Transfer Grilles

Transfer grilles are not permitted in walls or doors of corridors, regardless of whether or not they are protected by fusible link-operated dampers.
Exception**:** Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall be permitted to have ventilating louvers or to be undercut.

(j) Smoke Partitions

(i) **Materials**
The walls shall be constructed of materials as permitted by the building construction type.

(ii) **Fire Resistance Rating**
Unless otherwise required, smoke partitions shall have a minimum fire resistance rating of 1 hour and shall limit the transfer of smoke.

(iii) **Continuity**
Smoke partitions should extend from the floor to the underside of the floor or roof deck above, through any concealed spaces, such as those above suspended ceilings, and through interstitial structural and mechanical spaces. Other alternatives are provided in NFPA 101, Section 8.4.

(iv) **Penetrations and Joints**
Penetrations through a smoke partition shall be protected by a system or material that is capable of limiting the transfer of smoke and shall be fire resistance rated per NFPA 5000, Table 8.7.2 based on the rating of the penetrated assembly unless otherwise specified herein.

(v) **Ducts and Air Transfer Openings**
Air-transfer openings in smoke partitions shall be provided with approved combination fire and smoke dampers designed and tested in accordance with the requirements of UL Standards 555 and 555S or ISO equivalent. Dampers shall limit the transfer of smoke and be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein. Where the installation of dampers will interfere with the operation of a smoke control system, approved alternative protection shall be utilized.

(vi) **Opening Protectives**
Opening protectives for smoke partitions shall comply with NFPA 5000, Section 8.10.3. Doors shall be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein. Doors shall limit the transfer of smoke and shall not include transfer grilles. Doors that are normally required to be kept closed shall be automatic-closing or self-closing per NFPA 5000, Section 11.2.1.8.1.

Fire window assemblies, where provided, shall have a minimum fire resistance rating of 20 minutes per Table 8.7.2.

(k) Horizontal Exits

(i) Walls

Fire barriers separating building areas between which there are horizontal exits shall have hour fire resistance rating and shall provide a separation that is continuous to ground.

Where a fire barrier provides a horizontal exit in any story of a building, such fire barrier shall not be required on other stories, provided that the following criteria are met:

(1) The stories on which the fire barrier is omitted are separated from the story with the horizontal exit by construction having a fire resistance rating at least equal to that of the horizontal exit fire barrier.

(2) Vertical openings between the story with the horizontal exit and the open fire area story are enclosed with construction having a fire resistance rating at least equal to that of the horizontal exit fire barrier.

(3) All required exits, other than horizontal exits, discharge directly to the outside.

Where walls terminate at exterior walls at an angle of less than 180 degrees, the outside walls shall be 1-hour fire resistance rated with ¾-hour opening protection for a distance of 3.05 m on each side of the intersecting wall.

(ii) Openings

Every opening in a fire barrier shall be protected to limit the spread of fire and restrict the movement of smoke from one side of the fire barrier to the other. Doors in horizontal exits shall be designed and installed to minimize air leakage in accordance with NFPA 105, Standard for the Installation of Smoke Door Assemblies.

The fire protection rating for opening protectives in horizontal exits (fire barriers), shall be 1-1/2 hours in accordance with Table 8.7.2, NFPA 5000. Fire window assemblies shall not be permitted in wall openings unless as part of the door assembly.

All fire doors in horizontal exits shall be self-closing or automatic-closing and shall have positive latching hardware. An approved vision panel shall be required in each horizontal exit door. Center mullions shall be prohibited.

(l) Exit Passageways

(i) Walls

An exit passageway that serves as a discharge from a stair enclosure for more than 3 stories shall have a fire resistance barrier rating of not less than 2-hours.

An exit passageway not serving as a stair discharge or serving stairs connecting 3 stories or less shall have an enclosure fire resistance barrier rating of not less than 1 hour.

(ii) Openings

The fire resistance ratings of opening protectives shall be as follows:

(1) 1-1/2-hour for 2-hour exit passageways; and 3/4-hour for 1-hour exit passageways.

(2) Openings in exit passageways shall be limited to only those necessary to provide egress from normally occupied areas and those necessary for egress from passageways.

(iii) Penetrations

(1) Penetrations into and openings through an exit enclosure assembly shall be prohibited except for the following:

Electrical conduits serving the enclosure, required exit doors, ductwork and equipment necessary for independent stair pressurization, water and steam piping necessary for the heating or cooling of the exit enclosure, sprinkler piping, standpipes, fire alarm circuits that are protected in accordance with NFPA 101, Section 8.3.5

(2) Penetrations shall also be prohibited between adjacent exit enclosures.

(m) Smoke Barriers

(i) Walls

(1) Smoke barrier walls shall be constructed per NFPA 101, Section 8.5 and shall have a minimum 1- hour fire-resistance rating.

(2) Walls shall form an effective membrane continuous from outside wall to outside wall and from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction should be protected to afford the required fire-resistive rating of the wall or floor supported.

(3) Exception: Smoke barriers are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by smoke barrier walls.

(ii) Opening Protectives

Smoke barrier doors shall have a minimum 45-minute fire rating. Fire window assemblies shall have a minimum fire resistance rating of 45 minutes per Table 8.7.2, NFPA 5000. Doors shall be automatic-closing or self-closing. Cross-corridor openings in the means of egress shall be protected by a pair of swinging doors or a horizontal sliding door per NFPA 101, Section 18.3.7.7. Corridor openings not in the means of egress shall be permitted to use single leaf doors.

Where, a pair of opposite swinging doors is installed, they shall be without a center mullion. Vision panels shall also be provided, as for horizontal sliding doors and vision panels shall consist of fire-rated glazing materials in approved frames, the area of which should not exceed that tested. The

doors shall be close fitting within operational tolerances, and shall not have undercuts, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and shall be automatic closing by smoke detection or self-closing. Positive latching devices shall not be required. Air leakage criteria and installation requirements shall be per NFPA 101, Section 8.5.2.

(n) STRUCTURAL FRAME

The structural frame shall have 3 hour fire resistance rating.

(o) FLOORS AND FLOOR–CEILINGS

Floor-Ceiling assemblies shall have a minimum 2 hour fire resistance rating.

(i) **Openings for Floor-Ceilings**

Openings in floors shall comply with the requirements for vertical openings herein. Penetrations shall be protected in accordance with NFPA 5000, Section 8.8.

(p) ROOFS AND ROOF-CEILINGS

Roof-Ceiling assemblies shall have a minimum 1-½ hour fire resistance rating. Roofing systems shall be permitted to include combustible supports, decking, or roofing in accordance with NFPA 101, Sections 18.1.6.5 and 18.1.6.6.

(i) **Openings for Roof-Ceilings**

Openings in roof-ceiling assemblies shall be protected identically as openings for floor-ceiling assemblies herein. Skylights shall additionally be permitted per NFPA 5000, Section 8.2.2.3.3.

(ii) **Roof Covering**

The roof covering based on the type of construction specified herein, shall have a minimum classification of Class B per NFPA 5000 Table 38.2.2 and Chapter 38.

(q) VERTICAL OPENINGS

(i) **Protection Requirements**

Openings through floors shall be enclosed with 2-hour fire resistance rated barrier walls that shall be continuous from floor to floor, or floor to roof in accordance with NFPA 101, Section 8.6.

(1) Exception No. 1: pneumatic tube conveyors protected in accordance with NFPA 101, 8.3.5.1.

(2) Exception No. 2: atriums as permitted by NFPA 101, 8.6.7.

(3) Exception No. 3: convenience openings protected in accordance with NFPA 101, 8.6.8.

(4) Exception No. 4: escalators and moving walks protected in accordance with NFPA 101, 8.6.8.

Note: Unprotected openings in accordance with NFPA 101, Section 8.6.6, Communicating Space, shall not be permitted.

(ii) **Shafts.**

(1) Enclosures

Shaft enclosures shall have minimum 2 hour fire resistance rating.

(2) Extent of Enclosures

Shafts that do not extend to the bottom of the building or structure shall:

(a) Be enclosed at the lowest or highest level of the shaft with construction of the same fire resistive rating as the lowest floor through which the shaft passes, but not less than the rating of the shaft enclosure, or,

(b) Terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the rest of the building by a fire barrier having a fire-resistance rating and opening protection at least equal to the protection required for the shaft enclosure, or,

(c) Be protected by approved fire dampers installed in accordance with their listings at the lowest or highest floor level of the shaft, as applicable.

(3) Opening Protection

Opening protection (doors) for 2-hour rated enclosures shall have a 1½ hour fire resistance rating and shall be self-closing or automatic - closing and positive latching. Openings shall be limited to only those that are necessary for the purpose of the shaft. Fire window assemblies are not permitted in interior walls of shafts.

(4) Stair Penetrations

(a) Penetrations into and openings through an exit enclosure assembly shall be prohibited except for the following:

Electrical conduits, required exit doors, ductwork and equipment necessary for independent stair pressurization, water and steam piping necessary for the heating or cooling of the exit enclosure, sprinkler piping, standpipes

(b) Penetrations shall also be prohibited between adjacent exit enclosures.

(5) Refuse and Laundry Chutes

(a) <u>Access Rooms</u>

Access openings for refuse and laundry chutes shall be located in rooms or compartments enclosed by a fire barrier that has a fire-resistance rating of not less than 1 hour. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with IBC Section 715.4.7.3.

(b) <u>Termination Rooms</u>

Refuse and laundry chutes shall discharge into an enclosed room separated from the remainder of the building by a fire barrier that has a fire-resistance rating of not less than 1 hour. Openings into the termination room shall be protected by opening protectives having a fire protection rating of not less than ¾ hour. Doors shall be self- or automatic closing upon the detection of smoke in accordance with IBC Section 715.4.7.3.

(r) PENETRATIONS

Penetrations of fire resistance rated or smoke resistant construction shall be protected as follows.

(1)Fire Rated Assemblies

Fire stop systems and devices protecting through-penetrations and membrane-penetrations of fire resistance rated walls and horizontal assemblies shall be protected in accordance with NFPA 101, Section 8.3.5.

Where required per NFPA 5000, Section 8.8.8, fire dampers shall have minimum damper ratings as follows:

- 3 hours for fire resistance rated assemblies of 3 hours or greater
- 1-1/2 hours for fire resistance rated assemblies of less than 3 hours.

Fire dampers shall also comply with NFPA 101, Section 8.3.5 for penetrations.

(2)Smoke Resistant Assemblies

Penetrations passing through smoke barrier or smoke partition assemblies shall be protected by a system or material capable of restricting the transfer of smoke per NFPA 101, Section 8.5.6.

Where a smoke resistant assembly is also constructed to have a fire resistance rating, penetrations shall also comply with the requirements in NFPA 101, Section 8.3.5 for purposes of limiting the spread of fire for a time period equal to the fire resistance rating of the assembly.

Where smoke dampers are provided, they shall be designed and tested in accordance with the requirements of UL 555S, Standard for Smoke Dampers. Where combination fire/smoke dampers are required, they shall be designed and tested in accordance with the requirements of UL 555, Standard for Fire Dampers.

117. SPECIAL HAZARDS

(a) SEPARATION REQUIREMENTS

The following special hazard rooms and spaces shall be separated from the remainder of the building as follows.

(i) Transformer Location

The location of different types of transformers, the required enclosure construction and enclosure fire-rating shall conform to Part B of Article 450 and Section 450-41 of NEC.

(ii) Rooms containing combustion engine or gas, turbines, emergency generator room

The enclosing construction of these rooms shall have a minimum 2-hour barrier fire resistance rating.

(iii) Boiler and Fuel-fired Heaters

The Boiler and fuel-fired heaters housing / room shall have a minimum 2-hour barrier fire resistance rating where the largest piece of equipment is over 15 psi and 10 HP.

(iv) Gift Shops

Gift shops not exceeding 46.45 m2 in area shall be permitted to open onto a corridor or lobby without opening protective's, provided the building is protected throughout by an automatic sprinkler system.

(v) Waste and Linen Rooms

Waste and linen rooms shall have a minimum 2-hour barrier fire resistance rating.

(vi) Storage Rooms and Laundries Greater than 9.29 m2

Storage rooms and laundries greater than 9.29 m2 shall have a minimum 2-hour barrier fire resistance rating.

(vii) Plant Maintenance Shops

Plant maintenance shops shall have a minimum 2-hour barrier fire resistance rating.

(viii) Trash Collection Rooms

Trash collection rooms shall have a minimum 2-hour barrier fire resistance rating.

(ix) Laboratories Using Hazardous Materials Considered a Severe Hazard

Laboratories using hazardous materials considered a severe hazard shall have a minimum 2-hour barrier fire resistance rating.

(x) Paint Shops

Paint shops shall have a minimum 2-hour barrier fire resistance rating.

(xi) Vocational Shops Not Classified as Group H

Vocational shops not classified as Group H shall have a minimum of 1-hour barrier fire resistance rated construction.

(xii) Kitchens

Kitchens shall have a minimum 2-hour barrier fire resistance rating. Separate exhaust ducting for all kitchens/Cafeteria in the building shall be provided to discharge the smoke and hot gases outside the building. Kitchen and cafeteria/ dining shall not be located in basement. They shall be located at Ground, first or second floor.

(xiii) Boiler Rooms

Provision of boiler and boiler room (if applicable) shall conform to Indian Boiler Act. The boilers shall be installed in a fire resistant room of 2-hours fire rating. Catch pits shall be provided at the low level. The boiler room shall be provided with fresh air inlets and smoke exhausts directly to atmosphere.

(xiv) Medical Gas Storage Areas

Medical gas storage areas shall have a minimum 2-hour barrier fire resistance rating

(xv) Anesthetizing Locations

These storage areas are considered as hazardous and protected in accordance with Annex E of NFPA 99.

(b) LOCATION OF CRITICAL SERVICES:

All critical services such as Operation theatres, ICU, ICCU etc. shall be located at lower floors in the Ground to 4th floor only.

118. <u>INTERIOR FINISHES</u>

(a) WALLS AND CEILINGS

(i) Minimum Flame Spread

The reduction in flame spread classification as indicated below shall be permitted where the building is fully sprinkler protected in accordance with NFPA 13. The occupancy group (Annexure-I) and minimum flame spread classification requirement are given below:

Group I-2 Occupancy (Health care)	
a. Exit enclosures and passageways	Class B minimum.
b. Corridors Class B minimum.	Class B minimum
c. Rooms and spaces	Class B minimum
Group A occupancies (Assembly)	
d. Exit enclosures and passageways	Class B minimum.
e. Corridors.	Class B minimum
f. Rooms and spaces.	Class C minimum
Group B occupancies (Business)	
g. Exit enclosures and passageways	Class B minimum.
h. Corridors.	Class C minimum
i. Rooms and spaces.	Class C minimum
Group S-1 occupancies (Storage)	
j. Exit enclosures and passageways	Class C minimum.
k. Corridors	Class C minimum
l. Rooms and spaces.	Class C minimum

(ii) Textile Materials Applied to Walls and Ceilings

Class A, only permitted in rooms and areas protected throughout by an approved sprinkler system.

(iii) Special Insulation Requirements

Cellular or foamed plastic materials shall not be used as interior wall or ceiling finish unless specifically permitted by NFPA 101, Section 10.2.4.3.1 or 10.2.4.3.2.

119. <u>MEANS OF EGRESS</u>

(a) GENERAL

All components of egress shall be in accordance with NFPA 101, Chapter 7 unless modified herein or by NFPA 101, Section 18.2.

(i) Occupant Load Factors

The occupant load factors (square meter per person) provided in Annexure II shall be used for purposes of determining the required number of exits and exit capacity for rooms, floors, areas, and buildings.

(ii) Number of Exits

(1) There shall be a minimum of 2 exits per floor and 2 exits from each smoke compartment. Not less than one exit shall be one of the following:

(a) Door leading directly outside the building
(b) Stair
(c) Smoke proof enclosure
(d) Ramp
(e) Exit passageway

(2) Not less than 2 exits shall be provided from each smoke compartment. Egress shall be permitted through an adjacent compartment or compartments, but only if it shall not involve the return through the compartment of fire origin.

(3) The general guideline for the number of required exits from various spaces described by functional use is given below

TABLE – 29
Number of required exits for various occupancies in High-rise Hospital Building

S. No.	Occupancy	Number of Exits
(A)	**(B)**	**(C)**
1	Hospital	Sleeping Rooms or Suites – Two exit access doors shall be required from any patient sleeping rooms or suites over 93 m2. Non-Sleeping Rooms or Suites – Two exit access doors are required for rooms or suites exceeding 230 m2.
2	Assembly	At least 2 exits required.
3	Office	At least 2 exits are required in rooms or spaces exceeding an occupant count of 49, or exceeding a common path of travel of 30 m. Other variations may apply per NFPA 101, Section 38.2.4.
4	Kitchen	At least 2 exits are required in rooms or spaces exceeding an occupant count of 29, or exceeding a common path of travel of 30 m. Other variations may apply per NFPA 101, Section 42.2.4.
5	Mechanical	At least 2 exits are required in rooms or spaces exceeding an occupant count of 29, or exceeding a common path of travel of 30 m. Other variations may apply per NFPA 101, Section 42.2.4.
6	Outpatient	At least 2 exits required for any room exceeding 232 m2.
7	Retail	Retail At least 2 exits are required in rooms or spaces exceeding an occupant count of 49, or exceeding a common path of travel of 30 m. Other

		variations may apply per NFPA 101, Section 36.2.4.

(4) A minimum 3 exit staircases shall be provided where the calculated occupant load on a floor is greater than 500 and does not exceed 1,000 persons.

(5) Minimum 4 Exit staircases shall be provided where the calculated occupant load on a floor exceeds 1,000 persons.

(iii) Guard Rails

Where the elevation along open sides of a means of egress is more than 760 mm above the adjacent grade level below, guards shall be provided in accordance with NFPA 101, Section 7.2.2.4.

(iv) Impediments to Egress

Devices installed to restrict or impede the use of a means of egress under normal conditions shall be designed and installed such that they will provide free and clear access to the means of egress under emergency conditions unless otherwise specified in the special locking arrangement provisions of 7.2.1.6 and Chapter 18 of NFPA 101.

(v) Obstructions to Egress

Means of egress shall be maintained free of all obstructions or impediments at all times in the case of fire or other emergency.

(b) ARRANGEMENT AND EXIT ACCESS

The exit access i.e. the portion of aggress system that leads from any occupied portion of a building or structure to an exit shall comply with the following requirements.

(i) Corridor Access

(1) Every habitable room shall have an exit access door leading directly to an exit access corridor unless otherwise specified herein and NFPA 101, Section 18.2.5.5.1.
Exception: Rooms with exit doors opening directly to the outside at ground level per NFPA 101, Section 18.2.5.5.3

(2) Sleeping suites and non-sleeping suites shall have a minimum of one means of egress be directly to a corridor. Where suites are required to have two means of egress, the second one shall be permitted through another suite, provided that the separation between the suites complies with the corridor separation requirements herein (NFPA 101, Sections 18.3.6.2 through 18.3.6.5.

(ii) Remoteness of Exits or Exit Access Doorways

When two means of egress are required, exits or exit access doorways shall be separated by a minimum of one-third the maximum diagonal of a space or building in a sprinklered building.

When three or more means of egress are required, two exits or exit access doorways shall meet the requirements above and the additional exits shall be arranged a reasonable distance apart, so that if one becomes blocked the others will remain available.

(iii) Maximum Allowable Exit Access Travel Distances

The maximum travel distance of 45.0 meters is only allowed according to clause 4.5 Table (22) Part (4) of NBC, 2005

TABLE – 30
Maximum Allowable Exit Access Travel Distances in High-rise Hospital Building

S. No.	Occupancy/Location	Travel Distance
(A)	(B)	(C)
1	Sleeping Rooms – From any point in a health care sleeping room and an exit access door	15.24 m
2	Sleeping Suites – From any point in a health care sleeping suite to an exit access door	30.48 m. without having to pass through more than one intervening room
3	Non-Sleeping Suites – From any point in a health care non-sleeping suite to an exit access door	30.48 m where the suite is arranged with one intervening room 15.24 m where the suite is arranged with two intervening rooms
4	From any room door required as an exit access door to a required exit	Within healthcare areas 45 m.
5	From any point within a room to an exit	
6	Group I-2 occupancy (includes Child Care)	45m
7	Laboratories classified as Group H Occupancies	22.86 m. (H-1), 30.48 m. (H-2), 45 m. (H-3), 45 m (H-4) and 45 m. (H-5). (Classification as per IBC 2006 Section 307)
8	Health Care	45 m.
9	Business	45 m.
10	Assembly	45 m. when protected throughout by an approved, supervised automatic sprinkler system.
11	Storage	45 m
12	Outpatient	45 m
13	Common Path of Travel	
14	Business	22.86 m
15	Assembly	Permitted the first 6.10 m. from any point where serving any number of occupants and for the first 22.86 m. from any point where serving not more than 50 occupants.
16	Storage	30.48

(iv) Travel through Intervening Rooms

Exiting from any portion of the building shall be directly to an exit or a corridor.

Exceptions:

(1) Access to exits shall be permitted to occur through foyers, lobbies and reception rooms when constructed as required for corridors (IBC 1017.5)..
(2) Access from rooms or spaces shall be permitted to be through adjoining or intervening rooms, provided that such adjoining rooms are accessory to the areas served and are of less or equal hazard, or as permitted herein for Suites in the section on Maximum Allowable Travel Distances.
(3) Patient sleeping rooms shall be permitted to have one intervening room if the intervening room is not used as an exit access for more than eight patient beds.
(4) Special nursing suites shall be permitted to have one intervening room where the arrangement allows for direct and constant visual supervision by nursing personnel.
(5) For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through one intervening room where the travel distance to the exit access door is not greater than 30.48 m.
(6) For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 15.24 m.

(v) Exit Access Components – Corridors

TABLE – 31
Exit Access Components – Corridors in High-rise Hospital Building

S. No.	Component	Requirement
(A)	**(B)**	**(C)**
(a)	Width	
	1. In patient areas for bed movement	Minimum of 2.44 m
	2. Other than patient area	Minimum of 1.12 m
	3. Reduction in width	Doors in fully opened position and handrails must not reduce the required width by less than 0.18 m. Doors in any position must not reduce width by more than one-half. Projections into the clear width shall not exceed 0.11 m at or below the handrail height.
(b)	Dead Ends	Maximum of 9.14 m
(c)	Separation Requirements	See 2.2.3 Suites, and 2.2.4 Exit Corridors herein.
		Doors compliant with NFPA 101, Section 7.2.1 shall be permitted
(d)	Clear width - minimum	
	Serving I-2 portions used for movement of beds	2.0 m

	Other doors	1.2 m.
(e)	Width - maximum	2.0 m. max door leaf.
	1. Means of egress	Swing in the direction of exit travel when serving an occupant load of 50 or more.
	2. Roller latched doors	Not permitted.
(f)	In smoke barrier cross-corridor openings in the means of egress	45-minute fire resistance rated, smoke- and draft control doors shall be opposite swinging when installed across corridors with egress in both directions. Additionally these doors shall comply with the following:
		Have no center mullion.
		Have vision panels.
		Be closefitting and should be without undercuts, louvers or grilles.
		Have stops at the heads and jambs, and rabbet and astragals at the meeting edges.
		Be automatic closing by smoke detection.
		Positive latching devices are not required.
(g)	Other special doors	Special doors, such as revolving doors or sliding doors, may be used as egress doors per NFPA 101, Section 18.2.2.2.9.
(h)	Panic hardware	Each door in a means of egress from a Group A having an occupant load of 50 or more and any Group H occupancy should not be provided with a latch or lock unless it is panic hardware or fire exit hardware.
(i)	Locking	Patient sleeping room doors shall not be permitted to be locked except as permitted by NFPA 101, Section 18.2.2.2.2.
		Doors within the required means of egress shall not be equipped with a latch or lock requiring a tool or key from the egress side except as permitted by NFPA 101, Section 18.2.2.2.4.
		Doors within the required means of egress that are permitted by exception to be locked shall have provisions made for the rapid unlocking of the locks or locking devices per NFPA 101, Section 18.2.2.2.5.
		Doors in an exit passageway, stairway enclosure, horizontal exit, smoke barrier, or hazardous area enclosure (except boiler rooms, heater rooms, and mechanical equipment rooms) shall be permitted to be held open only by an automatic release device that complies with NFPA 101, 7.2.1.8.2. The doors shall release upon an alarm signal from the fire alarm system.
		Where egress doors are used in pairs, approved

		automatic flush bolts may be used, provided that the door leaf having the automatic flush bolts has no doorknob from the inside or surface-mounted hardware. (IBC 1008.1.8.3)
		Manually operated flush bolts or surface bolts are only allowed where a pair of doors serves a storage or equipment room. In these cases, the manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. (IBC 1008.1.8.3)

(c) THE EXIT

(i) Permissible exits shall be as follows:

(1) Doors leading directly to the outside of the building.
(2) Stairs
(3) Smoke proof Enclosures.
(4) Ramps
(5) Exit Passageways.
(6) Horizontal Exits.

(ii) Exit Width and Capacity

For exit stairways, a factor of 7.6 mm per occupant shall be applied. For other exit components, a factor of 5.0 mm per occupant shall be applied.

(iii) Stairs

Stairs shall comply with NFPA 101, Section 7.2.2 unless otherwise modified herein.

TABLE – 32
Stairs requirement in High-rise Hospital Building

S. No.	Component	Requirement
(A)	(B)	(C)
a.	Stair width	Minimum stair width shall be 2.0 m. clear width.
b.	Permissible projections	Shall not exceed 0.11 m. at or below the handrail height. Not limited above the headroom height required.
c.	Steps	
	Riser height	Minimum of 0.1 m; Maximum of 0.18 m
	Minimum tread	Minimum of 0.28 m
d.	Stair landing	Dimension in the direction of travel equal to the stair width
e.	Handrails	Required on both sides.
	Continuity	Shall be continuous, without interruption by newel posts or other obstructions for the full length of each flight of stairs.
	Height	Handrails shall be not less than 865 mm,

		and not more than 965 mm above the surface of the tread, measured vertically to the top of the rail from the leading edge of the tread.
f.	Roof access	In building four or more stories in height, one stair shall provide access to the roof.
g.	Stairway identification	Shall be provided per NFPA 101, Section 7.3.3.5.4.
h.	Variation of riser height	The variation of riser height for a flight of stairs shall not exceed 9.5 mm.
i.	Distance between landings	The vertical distances between landings as measured between the horizontal planes of adjacent landings shall not exceed 3.66 m.
j.	Exterior exit stairways	Not permitted as a required means of egress per IBC 1023.2 for Group I-2 occupancies or for any occupancies in high-rise buildings.
k.	Enclosures	Stair enclosures shall have minimum 2 hour barrier fire resistance rating. See Section 2.6.2 on Shafts herein.
l.	Openings	See protection of openings in Section 2.6.2.3 herein.
m.	Stairway marking	Stairway marking shall be in accordance with NFPA 101, Section 7.2.2.5.4.
n.	Stairway door locking	Stairway doors other than the exit discharge doors shall be permitted to be locked from stairway side. Stairway doors that are locked from the stairway side shall be capable of being unlocked simultaneously without unlatching upon a signal from the fire command center
o.	Stairway re-entry access	Re-entry access for health care occupancies shall be provided per NFPA 101 Section 7.2.1.5.7.

(iv) Smoke proof Exit Enclosures

Smoke proof enclosures shall comply with NFPA 101, Section 7.2.3 unless otherwise modified herein. Every required stairway serving floors more than 22.86 m. above the lowest level of fire department vehicle access shall comply with the provisions for smoke proof enclosures In accordance with NFPA 101: 7.2.3.

(1) Enclosure

A smoke proof enclosure shall be enclosed from the highest point to the lowest point and shall be separated from the remainder of the building by not less than 2-hour fire barriers. Access to the stairway shall be by way of a vestibule. The vestibule shall be within the 2-hour rated enclosure and shall be considered part of the smoke proof enclosure. The smoke proof enclosure shall be without openings other than the

required means of egress doors. Exception: When a stair pressurization system is used, a stair entrance vestibule is not required.

(2) Vestibule

Access to the stairway shall be by way of a vestibule. The vestibule shall be within the 2-hour rated enclosure and shall be considered part of the smoke proof enclosure. The door opening into the vestibule shall be protected with an approved fire door assembly having a minimum 1 ½-hour fire protection rating. The door from the vestibule into the stairway shall have a minimum 20-minute fire protection rating. Doors shall be self-closing or shall be automatic-closing by actuation of a smoke detector located within 3.05 m of the vestibule entrance door.

(3) Discharge

Every smoke proof enclosure shall discharge into a public way, into a yard or court having direct access to a public way, or into an exit passageway. Such exit passageways shall be without openings, other than the entrance to the smoke proof enclosure and the door opening to the outside yard, court, or public way. The exit passageway shall be separated from the remainder of the building by a 2-hour fire resistance rating.

(4) Stair Pressurization Alternative

When a stair pressurization system is used, a stair entrance vestibule is not required. Smoke proof enclosures using stair pressurization shall use an approved engineered system with a design pressure difference across the barrier of not less than 12.5 N/m2, and shall be capable of maintaining these pressure differences under likely conditions of stack effect or wind. The pressure difference across doors shall not exceed that which allows the door to begin to be opened by a force of 133 N.

(5) System Activation

The activation of the stair pressurization system shall be initiated by smoke detectors installed at each floor level in an approved location within 3.05 m. of the entrance to the smoke proof enclosure. When the closing device for the stair shaft is activated by smoke detection or power failure, the mechanical equipment shall activate and operate at the required performance levels. The required mechanical systems shall operate upon the activation of the smoke detectors specified above and by manual controls accessible to the fire department. The required system shall also be initiated by the following, if provided:

(a) Water flow signal from a complete automatic sprinkler system
(b) General evacuation alarm signal

(6) Ramps

Ramp (a) from Ground floor to the critical areas (b) from terrace to the refuge floor shall be provided.

The open external ramp with fire doors on each floor in the mandatory side and rear open space may also be considered after leaving clear 7.0 meters driveway.

(7) Exit Passageways

(a) Exit passageways shall comply with NFPA 101, Section 7.2.6 unless otherwise modified herein.

(b) Separation of exit passageways from the rest of the building shall be by construction having a minimum barrier fire resistance rating of not less than 2-hours.
  (a) Exception: Where the exit connects three stories or less, the separation shall have a barrier fire resistance rating of not less than 1-hour.
(c) Fire windows shall be permitted in openings per NFPA 101, Section 7.2.6.2.
(d) Exit passageways that discharge from stair enclosures shall have fire resistance ratings and protection of openings not less than those required of the stair enclosure (also see Section 2.2.7 herein).
(e) The width of an exit passageway shall be adequate to accommodate the aggregate required capacity of all exits that discharge through it.
  (b) Exception: the capacity shall not be required to be aggregated where an exit passageway additionally serves occupants on the level of exit discharge.
(f) The floor of an exit passageway shall be solid and without perforations.

(8)Horizontal Exits

Horizontal exits shall comply with NFPA 101, Section 7.2.4 unless otherwise modified herein or by NFPA 101, Section 18.2.2.5.

Accumulation space shall be provided on each side of the horizontal exit as follows:

- Not less than 2.8 (net) sq m per patient in a hospital or nursing home, or not less than 1.4 (net) sq m per resident in a limited care facility, shall be provided within the aggregated area consisting of corridors, patient rooms, treatment rooms, lounge or dining areas, and other similar areas
- On stories not housing bed or litter borne patients, not less than 0.56 (net) sq m per occupant shall be provided for the total number of occupants in adjoining compartments.

Horizontal exits shall be permitted for substitution of other exits to the extent that the total exit capacity shall not be reduced by more than 1/3 for healthcare or more than 50 percent for other occupancies

A single door shall be permitted across a corridor of a horizontal exit if all of the following conditions are met:

- The exit serves one direction only.
- Such door is a swinging door or a horizontal-sliding door complying with 7.2.1.14.
- The door is not less than 411/2 in. (1055 mm) in clear width.

Horizontal exits serving as a means of egress from both sides shall be permitted to be protected by a pair of swinging doors that swing in opposite directions from each other and each having a clear width as follows:

- Not less than 1055 mm for corridor widths of 2440 mm or greater, and,
- Not less than 810 mm for corridor widths of 1830 mm but less than 2440 mm..

Exception: Openings shall be permitted to be protected by horizontal sliding doors complying with NFPA 101 Section 7.2.1.14 that provide clear widths as follows:

- Not less than 2110 mm for corridor widths of 2440 mm or greater, and,
- Not less than 1625 mm for corridor widths of 1830 mm but less than 2440 mm

(d) THE EXIT DISCHARGE

Exit discharge shall comply with NFPA 101, Section 7.7 unless otherwise modified herein.

(i) Termination

Exits shall be permitted to terminate at the following:

(1) directly at a public way, exterior exit discharge, yard, court, open space, or other portions of the exit discharge that are of adequate width and size to provide occupants with a safe and unobstructed access to a public way,

(2) to an interior exit discharge in accordance with NFPA 101, Section 7.7.2,

(3) to a rooftop exit discharge in accordance with NFPA 101, Section 7.7.6, or,

(4) to a vestibule or foyer in accordance with NFPA 101, Section 7.7.2.5

(ii) Discharge inside of a building through the level of exit discharge

Not more than 50 percent of the required number of exits, and not more than 50 percent of the required egress capacity shall discharge through areas on the level of exit discharge. The discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily visible and identifiable from the point of discharge from the exit.

The area on the level of discharge shall be separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure.

Exception: The separation shall not be required where the levels below are part of anatrium with the level of discharge and the atrium is protected in accordance with NFP Section 8.6.7.

(iii) Marking of Exit Discharge

Stairs shall be arranged and the exit discharge marked to make clear the direction of egress to a public way. Stairs that continue more than one-half story beyond the level of exit discharge shall be interrupted at the level of exit discharge by partitions, doors, or other effective means.

(iv) Exit Courts

The width shall not be less than 1.12 m. The required width shall be unobstructed to a minimum height of 2.13 m. An exit court serving an occupant load of 10 or more and less than 3.05 m. in width shall have court walls of 1-hour fire-resistive construction for a distance 3.05 m. above the floor of the court and openings protected by fixed or self-closing assemblies having a 3/4 –hour fire-protection rating.

(e) ACCESSIBLE MEANS OF EGRESS

Accessible means of egress shall comply with the IBC as follows:

TABLE – 33
Accessible means of egress in High-rise Hospital Building

S. No.	Component	Requirement
(A)	(B)	(C)
1.	Where Required	Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required from any accessible space, each accessible portion of the space shall be served by accessible means of egress in at least the same number as the minimum required number of exits. In addition, the means of egress which provides access to or egress from, buildings for persons with disabilities, shall also comply with the requirements.
	Exceptions:	1. Not required in alterations to existing buildings.
		2. One accessible means of egress is required from an accessible mezzanine.
2.	Continuity and components	Shall be continuous to a public way and shall consist of one or more of the following components:
		1. Accessible routes.
		2. Stairways with vertical exit enclosures.
		3. Exterior exit stairways (not permitted in a Group I-2 occupancy).
		4. Elevators.
		5. Platform lifts.
		6. Horizontal exits.
		7. Ramps (exterior ramps not permitted for hospitals or high-rise buildings).
		8. Areas of refuge.
	Exceptions:	1. Where the exit discharge is not accessible, an exterior area of assisted rescue shall be provided.
		2. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge or an exterior area for assisted rescue.
3.	Elevators	One accessible means of egress shall be provided by an elevator in buildings where a required accessible floor is four or more stories above or below a level of exit discharge. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operational and signaling device requirements of Section 2.227 of ASME A17.1. Standby power shall be provided and the elevator shall be accessed from either an area of refuge or a horizontal exit.
4.	Exit Stairways	In order to be considered part of an accessible means of egress, an exit stairway shall have a clear width of not less than 1.22m between

		handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge or a horizontal exit.
5.	Platform Lifts	Shall not be part of an accessible means of egress except where allowed as part of a required accessible route in IBC Section 1109.7. Standby power shall be provided and the lift should not be enclosed.
6.	Areas of Refuge	Shall be accessible from the space it serves by an accessible means of egress. Every required area of refuge shall have direct access to an enclosed stairway or an elevator. Where an elevator lobby is used as an area of refuge, the shaft and lobby shall be a smoke proof enclosure except where the elevators are in an area of refuge formed by a horizontal exit or smoke barrier.
a.	Size	Sized to accommodate a wheelchair space of not less than 30 inches by 48 inches for each 200 occupants or portion thereof, based on the occupant load of the area of refuge and areas served by the area of refuge. The wheelchair space shall not reduce the required means of egress width. Access to any of the required wheelchair spaces in an area of refuge shall not be obstructed by more than one adjoining wheelchair space.
b.	Separation	Each area of refuge shall be separated from the remainder of the story by a smoke barrier or a horizontal exit except those located within vertical exit enclosures.
c.	Two-way communication	Shall be provided between area of refuge and the central control point. If the central control point is not constantly attended, the area of refuge shall have access to a public telephone system. The two-way communication system shall include both audible and visible signals.
d.	Instructions	Shall be posted adjoining the two-way communication system.
e.	Identification	Each door providing access to an area of refuge shall be provided with a sign stating "Area of Refuge" and the International Symbol of Accessibility.
7.		At exits and elevators serving as a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress.
8	Exterior area for	Shall be open to the outside air and meet the

	Assisted Rescue	requirements of IBC Section 1007.6.1. Separation walls shall comply with the requirements for exterior walls. Where walls or openings between the area for assisted rescue and the interior of the building, the building exterior walls within 3.048 m. horizontally of a non-rated wall or unprotected opening should have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls should be protected by opening protective having a fire protection rating of not less than ¾ hour. This construction should extend vertically from the ground to a point 3.048 m. above the floor level of the area for assisted rescue or to the roof line, whichever is lower.
a.	Openness	Shall be at least 50 percent open.
b.	Exterior exit stairway	Not permitted in Group I-2 occupancy.
c.	Identification	Shall be provided.

120. EMERGENCY SYSTEM REQUIREMENTS

(a) MEANS OF EGRESS IDENTIFICATION

Signs shall comply with NFPA 101, Section 7.10 unless otherwise modified herein.

(i) **Required Locations:** Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in a corridor is more than 30.48 m. or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:

(1) Exit signs are not required in rooms or areas that require only one means of egress.

(2) Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the Authority Having Jurisdiction.

(ii) **Power Requirements**: Exit signs shall be illuminated at all times. To ensure continued illumination for duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator.

Illumination of exit sign and directional signs shall be supplied by life safety branch of the electrical system as described in NFPA 99, Standard for Health Care Facilities.

(b) MEANS OF EGRESS ILLUMINATION (NFPA 101, 7.8)

(i) **Lighting Requirements:** Means of egress illumination shall be a minimum of 10.8 lux at the floor level throughout the means of egress (including the exit discharge) at all times the building is occupied.

(ii) **Power Requirements:** Means of egress illumination shall be on emergency power supplied by life safety branch of the electrical system as described in NFPA 99, Standard for Health Care Facilities.

The power supply shall normally be provided by the premises' electrical supply. In the event of power failure, an emergency electrical system shall automatically illuminate the following areas:

(1) Aisles and unenclosed stairways in rooms requiring two or more means of egress.
(2) Corridors, exit enclosures, and exit passageways in buildings required to have two or more exits.
(3) Interior exit discharge elements in buildings required to have two or more exits.

(c) EMERGENCY POWER SYSTEMS

An emergency power system complying with IBC Section 2702 shall be provided for the following emergency power loads:

(i) Exit signs and means of egress illumination
(ii) Elevator car lighting
(iii) Emergency voice/alarm communications systems
(iv) Automatic fire detection systems
(v) Fire alarm and monitoring systems
(vi) Power and lighting for the fire command center
(vii) Electrically powered fire pumps
(viii) Ventilation and automatic fire detection equipment for smoke proof enclosures
(ix) Not less than one elevator serving all floors, with standby power transferable to any elevator
(x) Mechanical equipment for smoke control systems.
(xi) Horizontal sliding doors
(xii) Standby generators shall be located in a room having a minimum 2 hour fire resistance-rated separation from the remainder of the building.

(d) EMERGENCY AND STANDBY POWER BRANCH CIRCUITS

Emergency and standby power shall be provided in accordance with NFPA 99: 4.4.2.2.2 and shall be supplied by an on-site generator.

i) Life Safety Branch
   (1) Illumination of means of egress.
   (2) Exit signs and exit directional signs.
   (3) Fire alarm systems.
   (4) Alarms required for systems used for the piping of non-flammable medical gases.
   (5) Hospital communication systems when used for emergency instructions.
   (6) Emergency generator room lighting and selected receptacles.
   (7) Elevator cab lighting, control, communication, and signal systems.
   (8) Automatically operated doors used for building egress.
   (9) Lighting in rooms where life-support systems are in use.
ii) Critical Branch
   (1) Critical care areas that use anesthetizing gases, task illumination, selected receptacles, and fixed equipment.
   (2) Isolated power systems in special environments.
   (3) Task illumination and selected receptacles in the following:
      (a) Patient care areas including infant nurseries, selected acute nursing areas, psychiatric bed areas, and ward treatment rooms.

(b) Medication preparation areas.
(c) Pharmacy dispensing areas.
(d) Nurses' stations.

(4) Additional specialized patient care task illumination and receptacles where required.
(5) Nurse call systems.
(6) Blood, bone, and tissue banks.
(7) Telephone equipment rooms and closets.
(8) Task illumination, select receptacle and selected power circuits for:
   (a) General care beds (at least one duplex receptacle per patient bedroom).
   (b) Angiographic labs.
   (c) Cardiac catheterization labs.
   (d) Coronary care units.
   (e) Hemodialysis rooms or areas.
   (f) Emergency room treatment areas (selected).
   (g) Human physiology labs.
   (h) Intensive care units.
   (i) Post-operative recovery rooms (selected).
(9) Additional task illumination, receptacles, and selected power circuits needed for effective facility operation. Single-phase fractional horsepower exhaust fan motors that are interlocked with three-phase motors on the equipment system shall be permitted to be connected to the critical branch.

iii) Source: On-site generator.
iv) Transfer Time: For life safety and critical branch 10 seconds or UPS where required.
v) Fuel Supply: An on-premises fuel supply sufficient not less than 2 hours full demand operation of the system shall be provided.

121. ELEVATORS

(a) **Minimum Dimensions**: Elevators shall be sized in accordance with requirements of
ANSI / ASME A17.1, unless otherwise modified herein. Elevators shall be sized to accommodate a 4-bed minimum to provide for bed / stretcher coupled with life saving equipments.

(b) **Elevator Operation and Installation**: Elevators shall comply with ANSI / ASME A17.1.

(c) **Fire Emergency Controls**: Elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ANSI / ASME A17.1.

(d) **Hoistway Venting:**
   (i) **Required Locations**: For elevator shafts extending through more than three stories.
   (ii) **Vent Area**: Not less than 3.5 percent of the area of the hoistway nor less than 0.28 m2 for each elevator car, and not less than 3.5 percent nor less than 0.047 m2 for each dumbwaiter car in the hoist way, whichever is greater.
   (iii) **Vent Configuration**: Of the total required vent area not less than one-third shall be permanently open. Closed portions of the required vent area shall consist of openings glazed with annealed glass not greater than 3.2 mm. in thickness.
   (iv) **Equipment Venting:** When solid-state equipment is used to operate the elevators the elevator equipment room shall be provided with an independent ventilator or air conditioning system to prevent overheating:

122. FIRE PROTECTION SYSTEMS

(a) **AUTOMATIC SPRINKLER SYSTEM**

The building shall be fully sprinkle red and supervised in accordance with NFPA 13, and modified herein.

A secondary water supply equal to the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for high-rise buildings in Seismic Design category C, D, E or F as determined by the IBC. The secondary water supply shall have a duration of not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.

A Class I standpipe system shall be provided.

Listed quick-response or listed residential sprinklers shall be used throughout smoke compartments containing patient sleeping rooms.

(b) **PORTABLE EXTINGUISHERS**

(i) Portable extinguishers shall be provided at each compartment / floor of the building in accordance with the more stringent requirements of IS 2190 and NFPA 10.

(ii) Mist equipment i.e., 9 liters (2 nos) per floor and 600 liters Mist (Trolley mounted) with 60.00meters hose in Fire Control Room shall be provided.

(c) **HOSE REELS**

One First Aid hose reel shall be provided for every 1000 sq.m. Floor area, located in the vicinity of an exit staircase.

(d) **YARD HYDRANTS AND WET STANDPIPES**

Yard hydrants and wet standpipe connections shall be provided per NFPA Standards unless otherwise modified herein. The most stringent of the requirements shall apply. Requirements are as follows:

Wet standpipes shall be provided for every 1000 sq. m of floor area with a minimum of the greater of 2 per floor, or one for each exit staircase. Yard hydrants shall be provided around the perimeter of the building at a distance of every 45 m.

(e) **FIRE PUMPS**

Fire pumps and jockey pumps shall be designed and installed per NFPA 20 based on the hydraulic demands of the fire protection systems provided.

(f) **WATER SUPPLY TANKS**

Terrace tank with a minimum capacity of 100,000 Liters shall be installed to provide an adequate water supply for fire protection systems.

An underground water tank with a minimum capacity of 4.00 lakhs Liters shall be provided for firefighting purposes.

123. FIRE DETECTION AND ALARM SYSTEMS

(a) Health care occupancies (per NFPA 101, Section 18.3.4) shall be provided with fire alarm and detection systems. They shall be Designed and installed per the more stringent of IS 2189 and NFPA unless as modified herein.

(b) **ALARM INITIATING DEVICES**

Initiation of the required fire alarm systems shall be by manual means and by means of any required detection devices, detection systems, or sprinkler system water flow alarms. When activated, alarm initiating devices shall activate audible and visible alarm signals. The general evacuation alarm signal shall operate throughout the entire building.

Operation of any control initiating device in the fire alarm system shall automatically accomplish the fire safety control function(s) for which the device is designed.

(i) **Manual Fire Alarm Stations**

Manual call points (Pull stations) shall be provided in the natural path of escape near every exit door at each floor including basements. The travel distance to a Manual call point shall not be more than 60.96 m.

Manual pull stations may alternatively be located at nurses' stations in patient sleeping areas in lieu of required exits provided they are visible and continuously accessible, and do not exceed 60.96 m. travel distance.

(ii) **Smoke Detectors**

(1) Duct smoke detectors shall be provided in air supply systems over 0.94 m3/s, located in the main return air and exhaust air plenums.
(2) Duct smoke detectors shall be provided in return air systems serving more than 1 story and 7.08 m3/s, located at each connection to a vertical duct or riser.
(3) Smoke detectors shall be provided in spaces open to corridors unless they are directly supervised from the nurse's station. This includes waiting and similar spaces open to the corridor.
(4) Smoke detectors shall be provided in elevator lobbies and machine rooms to recall elevators.
(5) Smoke detector shall be provided at each smoke damper for damper activation.
(6) Smoke detectors shall be provided at hold-open doors, located on each side of the doors.
(7) Smoke detectors, which receive primary power from the building wiring, shall be provided in the patient sleeping rooms with visual display in corridor outside room and at the nurses' station.
(8) In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, elevator machine rooms and in elevator lobbies.
(9) Corridor smoke detection is not required in smoke compartments containing patient sleeping units where patient sleeping units are provided with smoke detectors that comply with UL268. Such detectors shall provide a visual display on the corridor side of each patient sleeping unit and an audible and visual alarm at the nursing station attending each unit.
(10) Corridor smoke detection is not required in smoke compartments containing patient sleeping units, where patient sleeping units are equipped with automatic door –closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

(iii) **Sprinkler System Water Flow Devices**

A supervised control valve tamper switch and water flow detection device shall be provided at the lateral connection to the sprinkler system on each floor.

All valves controlling the water supply for automatic sprinkler systems, pumps, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised.

Exceptions:

(1) Jockey pump control valves that are sealed or locked in the open position.

(2) Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.
(3) Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.

(c) **ALARM INITIATION**

Where an alarm notification system is required, it shall be activated by the following devices sending signals to the fire alarm system:

(i) Automatic detection devices.
(ii) Sprinkler water-flow devices and other extinguishing system operation Manual fire alarm boxes.

(d) **ALARM ANNUNCIATION AND ZONING**

Alarm annunciation and zoning shall be per NFPA 101, Section 9.6.7 unless modified as follows.

Alarm zones shall be permitted to coincide with the areas of compliant smoke compartments.

(e) **OCCUPANT NOTIFICATION**

Audible and visual alarms shall be provided in all non-patient areas and shall be listed for their purpose.

Automatic occupant notification of alarm shall be provided in accordance with NFPA 101, Section 9.6.3.with the following exceptions:

Exceptions:

(i) Smoke detectors located at doors for the exclusive operation of automatic door release shall be required to activate the building evacuation alarm, provided that the power supply and installation wiring to the detectors are monitored by the building fire alarm system, and the activation of the detectors initiates a supervisory signal at a constantly attended location.
(ii) Visual alarms shall be permitted to replace audible alarms for critical-care areas of Group I-2occupancies.

(f) **FIRE SERVICES NOTIFICATION**

Notification of the fire services shall be in accordance with NFPA 101 Section 9.6.4.

124. EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS

(a) EMERGENCY VOICE/ALARM SYSTEM

An emergency voice/alarm communication system shall be required.

The operation of any automatic fire detection, sprinkler water-flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information on a minimum of the alarming floor, the floor above and the floor below in accordance with Section 404 of the International Fire Code. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows:

1. Elevator groups
2. Exit stairways
3. Each floor
4. Areas of refuge as defined in IBC Section 1002.1

In Group I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification should be broadcast over the overhead page.

(i) Manual Override

A manual override for emergency voice communication shall be provided on a selective and all-call basis for all paging zones.

(ii) Live Voice Messages

The emergency voice/alarm communication system shall also have the capability to broadcast live voice messages through paging zones on a selective and all-call basis.

(iii) Design and Installation

The emergency voice/alarm communication system shall be designed and installed in accordance with NFPA 72.

(b) FIRE DEPARTMENT COMMUNICATIONS SYSTEM

An approved two-way fire department communications system shall be provided for fire department use and shall be designed and installed in accordance with NFPA 72. It shall operate between a fire command centre and elevators (lifts), elevator lobbies (lift landings), emergency and standby power rooms, fire pump rooms, areas of refuge, and inside enclosed exit stairways. The main control unit shall be located in the fire command centre. Fire department communication devices / telephones shall be provided at the following areas:

(i) Stairway landings at each floor level within enclosed stairways
(ii) Lifts and lift landings
(iii) Refuge areas
(iv) All critical service areas such as Operation theatres, ICU, ICCU etc.

Fire department radio systems shall be permitted to be provided where approved by the fire department.

(c) FIRE COMMAND CENTER

A fire command center shall be provided. The location and accessibility shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than 1-hour fire barrier or horizontal assembly, or both. The room shall be a minimum of 9 m2 with a minimum dimension of 2.44 m. A layout of the fire command center and all features required shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and contain the following features:

(i) The emergency voice/alarm communication system unit
(ii) The fire department communications unit
(iii) Fire detection and alarm system annunciator unit
(iv) Annunciator unit visually indicating the location of the elevators and whether they are operational
(v) Status indicators and controls for air-handling systems.
(vi) The fire-fighter's control panel required for smoke-control systems.
(vii) Controls for unlocking stairway doors simultaneously.
(viii) Sprinkler valve and water-flow detector display panels.
(ix) Emergency and standby power status indicators.
(x) A telephone for fire department use with controlled access to the public telephone system.
(xi) Fire pumps status indicators.
(xii) Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access Worktable.
(xiii) Generator supervision devices, manual start and transfer features.
(xiv) Public address system, where specifically required by other sections of the IBC.

(xv) Evacuation Chairs and Evacuation Stretchers (each 4 no's per floor) shall be provided for evacuation in case of emergency.

125. ATRIUM REQUIREMENTS

(a) DEFINITION

A large-volume space created by a floor opening or series of floor openings connecting two or more stories that is covered at the top of the series of openings and is used for purposes other than an enclosed stairway; elevator hoist way; escalator opening; or utility shaft used for plumbing, electrical, air-conditioning, or communication facilities.

(b) USES PERMITTED WITHIN ATRIA

The occupancy within the atrium space shall meet the specifications for classification as low or ordinary hazard contents.

(c) SEPARATION

An atrium shall be separated from the adjacent spaces by fire barriers of not less than 1-hour fire resistance rating with opening protective for corridor walls.

Exceptions:

(i) Any number of levels of the building shall be permitted to open directly to the atrium without enclosure based on the results of the smoke control engineering analysis described above.

(ii) Glass walls and inoperable windows shall be permitted in lieu of the fire barriers where automatic sprinklers are spaced along both sides of the glass wall and the inoperable window at intervals not to exceed 1.83 m. The automatic sprinklers shall be located at a distance from the glass not to exceed 0.3 m. and should be arranged so that the entire surface of the glass is wet upon operation of the sprinklers. The glass shall be tempered, wired, or laminated glass held in place by a gasket system that allows the glass framing system to deflect without breaking(loading) the glass before the sprinklers operate. Sprinklers shall not be required on the atrium side of the glass wall and the inoperable window where there is no walkway or other floor area on the atrium side above the main floor level. Doors in such walls shall be glass or other material that resists the passage of smoke. Doors shall be self-closing or automatic-closing upon detection of smoke.

(iii) A glass-block wall assembly in accordance with IBC Section 2110 and having a ¾- hour fire protection rating.

(iv) The adjacent spaces of any three floors of the atrium shall not be required to be separated from the atrium where such spaces are included in the design of the smoke control system.

(d) SMOKE CONTROL

(i) **System Design Criteria**

Where an atrium exceeds 2 stories, an engineering analysis shall be performed to demonstrate that the building is designed to keep the smoke layer interface above the highest unprotected opening to adjoining spaces, or 1.83 m. above the highest floor level of exit access open to the atrium for a period equal to 1.5 times the calculated egress time or 20 minutes, whichever is greater. A smoke control system, where required, shall be installed in accordance with IBC Section 909.

(ii) **System Activation**

Where an engineered smoke control system is installed, the system shall be independently activated by each of the following:

1. The required automatic sprinkler system or automatic smoke detection device designed to activate the smoke control system.
2. Manual controls that are readily accessible to the fire department.

126. EGRESS TRAVEL

In other than the lowest level of the atrium, where the required means of egress is through the atrium space, the portion of exit access travel distance within the atrium space shall not exceed 60.96 m.

127. RISK ASSESSMENT REPORT

The fire and life safety risk assessment report of High Rise Hospital Building conforming to NFPA-1031 (Sec 5 &7) shall be prepared by, but not limited to any of the following reputable Institutions or organizations:

(a) Institution of Fire Engineers (IFE, India) (or) BE Fire Engineers.
(b) Authorized agency/experts panel of Institution of Fire Engineers (IFE) (or)
(c)National Association of Fire Officers (NAFO, India) (or)
(d) Any recognized university or any other agency approved by the Director General of Fire and Emergency Services, A.P., Hyderabad.

128. BASEMENT PROTECTION

(a) General

(i) Basements shall comply with the IBC for S-2 Storage occupancies.
Exception: Means of Egress shall be in accordance with NFPA 5000 and NFPA 101.

(ii) Basements shall not be used for any other purpose except parking and building services Exception: Specialized medical facilities/services compliant with NFPA 99 shall be permitted in the second level basement.

(b) VENTILATON AND SMOKE MANAGEMENT

Basements Ventilation shall be provided as below: (NBC Part-4 (C.1.6).

(i) The building shall be provided with the ventilation strictly in accordance with Part- VIII Section-I and Clause C-1.6.1 to C — 1.6.6 of Part-IV of National Building Code of India. The smoke control/extraction system shall be designed as per NBC Part-4/IBC Section909 and NFPA-92. Where conflicts exist, the most stringent provisions shall apply.

(ii) Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts. Alternatively, a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level. Inlets and extracts may be terminated at ground level with stall board or pavement lights should be in position easily accessible to the fire brigade and clearly marked ' SMOKE OUTLET' or" AIR INLET" with an indication of area Served at or near the opening. (NBC Part-4(C.1.6.1).

(iii)The staircase serving basements shall be of enclosed type with a fire resistance the greater of not less than 2 hours or the floor/ceiling construction that it is Penetrating, and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any fire in the basement shall not obstruct any exit serving the ground and upper Stories of the building and shall

communicate with basement through a lobby Provided with fire resisting self closing doors of 1 hour resistance. (NBC Part-4 (C.1.6.2), or as otherwise specified herein.

(iv) In multi-storey basements, intake ducts may serve all basements levels, but each basement level shall have separate smoke outlet duct or ducts. Ducts so provided shall have the same fire resistance rating as the compartment itself. (NBC Part-4 (C.1.6.3) or as otherwise specified herein.

(v) Mechanical extractors for smoke venting system from lower basement levels shall also be provided. The system shall be of such design as to automatically operate on activation of heat/smoke sensitive defectors or sprinklers. It shall also have an arrangement to be capable of a manual start. (NBC Part-4 (C.1.6.4).

(vi) Mechanical extractors shall have an internal locking arrangement, so that extractors shall continue to operate and supply fans shall stop automatically with actuation of fire detectors. (NBC Part-4 (C.1.6.4.1).

(vii) Mechanical extractors shall be designed to permit 30 air changes per hour in case of fire or distress call. (NBC Part-4 (C.1.6.4.2).

(viii) Mechanical extractor shall have an alternative source of supply. (NBC Part-4 (C.1.6.4.3).

(ix) Ventilating ducts shall be integrated with the structure and made out of brick masonry of reinforced cement concrete as far as possible and when this duct crosses the transformer area or electrical switchboard, fire dampers shall be provided. (NBC Part-4 (C.1.6.4.4).

(x) If cutouts are provided from basements to the upper floors, these openings shall be protected by sprinkler head at close spacing so as to form a water curtain in the event office. (NBC Part-4 (C.1.6.6).

129. SMOKE COMPARTMENTATION

(a) For every storey used by patient for sleeping or treatment, or other stories with an occupant load of 50 or more persons, floors shall be divided into separate fire/ smoke compartments with areas not exceeding 500 m2 and enclosing construction having a minimum 2 hour fire rating, unless otherwise specified herein.

(b) The services, standby generator and store must be segregated from others by erecting fire-resistant wall of not less than 2 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire / smoke check doors of not less than 1-1/2 hour fire rating.

(c) All electric cables shall be laid in separate shafts and shall be sealed at every floor with fire resistant material of similar rating. The wall in between and all around the shafts shall also be of minimum two hours fire rating. (clause 6.3 and C-9 Part-4 NBC, 2005).

(d) The entry to the staircase from all levels shall be segregated with a self-closing fire /smoke check door of not less than a 1-1/2 hour fire rating. All vertical and horizontal openings at each floor level throughout the building shall be sealed properly with the non-combustible material in order to maintain the rating of the barrier element. Wherever false ceiling / suspended ceiling is provided, it shall be of one hour fire rated material. The compartmentation shall be extended up to ceiling level. (clause 6.3 and C-9 Part-4NBC, 2005). Fire rated compartments shall extend slab to slab when a suspended ceiling is used.

(e) The maximum travel distance to a smoke compartment door within a smoke compartment shall be 45.0 m.
(f) The smoke compartment shall be sized to accommodate occupants of the compartment plus occupant from adjacent compartments using 2.8 m2 per non-ambulatory occupants and 0.56 m2 for others.
(g) A means of egress shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which the egress path originated.
(h) Smoke compartments shall have 1-hour fire-resistive, smoke tight construction extending from exterior wall to exterior wall, or smoke barrier to smoke barrier, slab to slab, or any combination.
Exception: Smoke barriers shall not be required in interstitial spaces, where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to the provided by the smoke-barrier walls.
(i) Smoke compartment doors and draft assemblies shall have a minimum fire resistance rating of 45-minutes per 2.2.8.2 herein. Where doors are installed across corridors, a pair of opposite swinging doors without a center mullion or horizontal sliding doors shall be installed having vision panels consisting of fire-rated glazing materials in approved frames, the area of which should not exceed that tested. The doors shall be close fitting within operational tolerances, and shall not have undercuts, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and should be automatic closing by smoke detection. Positive-latching devices are not required.
(j) Where ducts penetrate smoke compartments, a listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a smoke barrier. Smoke dampers and smoke damper actuation methods shall comply with IBC Section 716.3.2.1.
Exception: Smoke dampers are not required where the openings in ducts are l limited to a single smoke compartment and the ducts are constructed of steel.
(k) Buildings containing health care facilities shall be subdivided by smoke barriers into compartments as follows:
   (i) To divide every story used by inpatients for sleeping or treatment into not less than two smoke compartments,
   (ii) To divide every story having an occupant load of 50 or more persons, regardless of use, into not less than two smoke compartments,
   (iii) To limit the size of each smoke compartment required by (1) and (2) to an area not exceeding 2100m2, unless the area is an atrium separated in accordance with NFPA 101Section 8.6.7, in which case no limitation in size is required, and,
   (iv) To limit the travel distance from any point to reach a door in the required smoke barrier to a distance not exceeding 45.0 m.
(l) The smoke barrier subdivision requirement in Item xi) herein shall not apply to the following:
   (i) Stories that do not contain a health care occupancy located directly above the healthcare occupancy,
   (ii) Areas that do not contain a health care occupancy and that are separated from the health care occupancy by a fire barrier complying with NFPA 101, Section 7.2.4.3,

(iii) Stories that do not contain a health care occupancy and that are more than one story below the health care occupancy, and,

(iv) Open-air parking structures protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

130. ELECTRICAL REQUIREMENTS

(a) Only Dry Type Transformer should be installed if located in the basements.

(b) The construction of electric sub-station and installation of Transformer, LT & HT panels shall be as per the provisions specified by the Electrical Authority. However, the following points shall be followed:

(i) The HT & LT panels shall be separated with walls of 2 hours fire resistance rating. Enclosure walls shall extend up to one meter above the highest point of the transformer.

(ii) LT & HT panels shall be protected with manually operated CO2 protection system designed and installed per NFPA 12. Two dry chemical powder type fire extinguishers of 10 kg with BIS Certification marks shall be provided outside the transformer room.

(iii) Insulated mats tested on 11 KV and at least one pair rubber gloves shall be provided in every electrical switch/panel room of substation. Independent ventilation system shall be provided for LT/HT panel and transformer rooms.

(c) EMERGENCY ELECTRICAL SERVICES

Provide separate electrical circuits to feed emergency services and systems such as firefighting pumps, lifts, automatic fire detection, emergency voice/communication, fire alarm, staircase and emergency lighting, and exit signage shall be provided. Smoke venting and signage circuit shall be laid in separate conduit so that fire in one circuit will not affect the others. Master switches controlling essential services circuits shall be clearly labeled.

See Section 6.0 herein for additional requirements.

(d) ELECTRICAL WIRING

(i) The electrical wiring shall be provided in metal / FRLSPVC conduits. MCBs and ELCB shall be installed. The electrical services shall be strictly in accordance to Clause C.1.12 of Appendix-D' of NBC Part-IV/NFPA – 70. Fire resisting cables or fire resistance achieved by enclosing construction shall be used in the building. Power supply cables and the ducting shall not be taken through the staircase or any passage way used as an escape route. All the cables shall be only of Fire Resistant Low Smoke type when the fire resistance rating is derived solely from the cable use.

(ii) Fault tolerant wiring in alarm system to be used (NFPA, 72 (3-4).

(e) EMERGENCY POWER SUPPLY

(i) The standby electric generator installed shall be of adequate capacity to supply power to staircase and emergency lighting circuits, lifts, exit signs, automatic fire detection, emergency voice/communication, fire alarm, and fire pumps in case of failure of normal electric supply. The generator shall be capable of taking starting current of all the machines and circuits stated

above simultaneously and must be automatic in action (NFPA-110). The engine starting Battery system should be duplicated.

(ii) UPS shall be installed to cater to the critical load of Alarm and Public Address System (NFPA-111).

(iii) A dedicated 25 KW emergency electrical generator should be installed to back up the main standby generator for alarm system, Public Address System and UPS.

See Section 6.0 herein for additional requirements.

131. DECORATIVE MATERIALS AND FURNISHINGS

(a) All the fabric used for seats, curtain, covering on sidewall, matting/ carpeting etc. shall also have Class-I rating as prescribed in NBC Part-IV/NFPA,99.

(b) Draperies, curtains, furnishings and decorations shall comply with Chapter 10 – Interior Finish, Contents and Furnishings, NFPA 101.

(c) Only flame retardant material shall be used for interior decoration and upholstery top recent generation of toxic smoke / fumes. (NBC Part-4 (3.4.15)

See NFPA 101 Section 18.7.5 for additional requirements.

132. AIR-CONDITIONING SYSTEM

Air conditioning system shall conform to Clause D-1.17 of part IV and Section 3 of Part VIII of National Building Code of India. However, following points shall be ensured:

(a) Air ducts serving main floor areas, corridors etc. shall not pass through the staircase enclosures.

(b) Automatic fire dampers shall be provided in the ducts at the inlets of the fresh air and return air of each compartment /floor on every floor. The fire dampers shall be so arranged so as to close by gravity in the direction of the air movement and to remain tightly closed automatically upon operation of smoke/ heat detectors and signal transmittal to the fire alarm system.

(c) The air handling units shall be separate for each floor/each compartment at each floor level. The air ducts for every floor/compartment shall be separated and not interconnected with the ducting of any other compartment.

See NFPA 101 Section 18.5.2 for additional requirements.

133. REFUGE FLOOR/AREA

(a) One refuge floor at a height of 30.0 meters shall be provided for safe evacuation with maximum of 2.5 meters floor height.

(b) Refuge areas as per clause 4.12.3 part 4 of NBC 2005, i.e., 0.3m2 per person of two consecutive floors at the height of 24m, 39m and 54m levels shall be provided.

(c) Refuge area - definition: An area of refuge is a location in a building designed to hold occupants during a fire or other emergency, when evacuation may not be safe or possible. Occupants can wait there until rescued by firefighters. This can apply to the following:

(i) any persons who cannot access a safe escape route

(ii) any persons assisting another person who is prevented from escaping

(iii) patients in a hospital

(iv) sick people

(v) people with disabilities

(vi) old people
(vii) very young children or infants
(viii) Medical personnel who may be operating on a patient at the time of the emergency.

(d) Technical requirements: An Area of refuge is typically equipped with a steady supply of fresh outside air. The ducting that must supply such fresh air is referred to as pressurization ductwork. Such ductwork are items of passive fire protection, subject to fire testing, product certification, and listing and approval use and compliance. The idea is that the ductwork must remain operable even while exposed to fire for a duration of two hours. The electrical equipment supplying power must also be equipped with approved circuit integrity measures. (NFPA 70 & 99).
(e) Refuge area shall not be utilized for any other purpose and shall be kept vacant for the assembly of occupants in case of any emergency.

134. OTHER REQUIREMENTS

(a) Provision for Helipad should be made on the terrace floor (roof) according to the guidelines issued by the Director General, Civil Aviation, Government of India, New Delhi in Section (4) Series 'B' Part-ll dt. 21.12.2005. NFPA 418 shall be used as guidance.
(b) Fluorescent colored floor strips / glowing paint signs on the walls shall be provided on all floors at each level to guide the direction for escaping towards a safe place in case of an emergency.
(c) Separate Ramps to the Basement for entry and exit of vehicles shall be provided.
(d) The hospital developer/firm shall provide all the required Fire Safety measures (Passive & active) and Fire prevention procedures and planning, training and drills programmers' for the isolation of fire, transfer of occupants to areas of refuges or total evacuation of the building during the course of constructing Hospitals. The builder shall submit the certificates from the manufacturers of all Fire Fighting Equipment installed.
Also see Section 5.5, Item 6 herein for additional requirements pertinent to Areas of Refuge.

135. MANAGEMENT AND MAINTENANCE OF GENERAL FIRE SAFETY MEASURES

The Management of the High Rise Hospital Building shall observe the following: General Fire Safety measures that shall be adhered to at all times for purposes of fully complying with the Manufacturer's instructions and NBC/NFPA stipulations. NFPA 13, 25, 99,101, and 110 provide several options so that the more suitable option is adopted. The particular option adopted shall be clearly indicated and approval from Fire Services should be obtained.

(a) FLAMMABLE LIQUIDS

The maximum allowable quantities (MAQ's) of flammable materials shall comply with NFPA 30. The handling of such liquids shall not be permitted by unauthorized persons. (NFPA 99)

(b) HEATING EQUIPMENT:

The doors to furnace room shall be equipped with automatic closers and be kept closed.

The flues, pipes and steam lines shall be in good condition and properly insulated.

There shall be a gas cut-off outside the building.

(c) KITCHENS :

(i) The cooking equipment shall be provided with a steel range hood.

(ii) The cooking facilities shall be provided with a pre-engineering fire suppression system..

(iii) The discharge of automatic extinguishing system shall be monitored by the fire alarm system and provide occupant notification.

(iv) Cooking facilities shall be protected per NFPA 101, Section 18.3.2.5.

(d) LAUNDRY:

(i) The laundry doors to the main building shall be kept normally closed.

(ii) The electric devices and irons shall have operative automatic heat controls.

(iii) Keep the tumbler free from lint and dust.

(iv) Safety pilot lights shall be operative.

(e) LABORATORY:

(i) Flammable liquids shall be stored properly in listed flammable liquids cabinets or another approved manner.

(ii) The acids stored shall be handled and properly stored.

(iii) The connections of gas fired or open flame equipment shall be in good condition.

(f) OXYGEN & NITROUS OXIDE STORAGE:

(i) The oxygen and nitrous oxide cylinders shall be stored separately from other gases in accordance with the applicable NFPA standards.

(ii) 'No Smoking' signs and nitrous oxide warnings shall be posted on store room doors.

(iii) The cylinders shall be protected from the sun.

(iv) The cylinders shall be removed from steam pipes or radiators to prevent contact.

(g) GENERATORS:

(i) Generators shall be in good operating condition.

(ii) Generators shall start automatically.

(iii) Generators shall be tested under load monthly.

(h) WATER HEATERS:

(i) The water heaters shall be properly vented.

(ii) The water heaters shall be equipped with 100% safety pilots.

(iii) The water heaters shall be equipped with pressure relief valves.

(i) GENERAL

(i) Corridors shall be kept free from storage of beds, linen, carts, etc.

(ii) The space beneath stairs and elevators shall be kept free from storage of any materials.

(iii) The trash and laundry chutes shall be sprinklered and additionally comply with NFPA 101 Section 18.5.4.

(iv) The covers on breaker panels and face plates shall be kept in good condition.

(v) The appliance cords shall be kept in good condition.

(vi) The appliance cords shall be protected against mechanical injury.

(vii) Only approved metal containers shall be used for all oily waste, polishing or cleaning materials.

(viii) Combustible liquids shall be kept in approved metal cans.

(ix) The refuse should be removed from the premises or burned daily.

(x) The sprinkler heads shall be unobstructed and adequate clearances maintained.

(xi) All employees shall be made aware of the location of fire extinguishers and be trained in its use and operation.

(xii) The fire alarm devices on each floor shall be maintained in good working condition.

(xiii) The signs giving location of pull stations should be properly maintained.

(xiv) The pull stations shall be unobstructed and plainly marked.

(xv) The plan for evacuation of patients shall be prepared and displayed at appropriate places.

(j) FIRE ALARM SYSTEM SEQUENCE OF OPERATION:

(a) Operation of any manual pull station, automatic smoke detector, heat detector, and duct mounted smoke detector or water flow switch shall cause the following actions and indications:

(i) The system common alarm LED on the CPU shall flash. The internal audible device shall sound.

(ii) The 80 character backlit alphanumeric display, shall display the device type, device location, time and date of alarm and a unique custom message.

(iii) Transfer common alarm contacts for sending an alarm signal to an approved central station. (Two dedicated telephone lines, connection and service by owner).

(iv) Activate the fire alarm audio/visual signals throughout the facility.

(v) Shutdown all AHUs over 2000 cfm.

(b) Operation of any operating room ceiling mounted smoke detector or return air duct smoke detector shall cause the following actions and indications:

(i) Return air damper shall transfer to fully close.

(ii) Outside air damper shall transfer to fully open.

(iii) Exhaust damper shall transfer to fully open and activate exhaust fan.

(c) Operation of outside air or supply air duct smoke detector unit shall shut down. Exhaust damper shall remain in full open position or transfer to that position and activate exhaust fan.

136. FIRE MANAGEMENT

(a) FIRE CONTROL ROOM: Fire control room shall be established on the ground floor, near the entrance and shall be manned round the clock.

(b) FIRE STATION: The builder shall provide a Fire Station on a suitable plot measuring 1000sq.y with (i) onetime Non-Recurring cost of Building, Water Tender & Equipment and a Hydraulic platform with 54.0 meters. Working height and (ii) Recurring cost of salaries, POL, etc., for 5 years as processing fee.

(c) FIRE OFFICER AND CREW:- A Fire Officer with experience of not less than 3 years in Government / public Sector undertakings / corporate Sector in the

rank of Station Fire Officer or above shall be available on the premises along with security personnel trained in firefighting and rescue for purposes of maintaining fire safety systems in trim working condition at all times and to conduct training in first aid firefighting and fire drills. The Fire Officer with trained fire personnel shall respond to all emergency calls in the Hospital round the clock

(d) FIRE SAFETY PLAN : (NFPA – 101 (18.7.2.1)

Fire Safety plan should be developed by the management and should be approved by the Director General of Disaster Response and Fire Services before occupancy. The following shall be provided in the written Fire safety Plan to train response teams, maintenance staff, and nursing staff and fire wardens.

(i) The use of alarms
(ii) Staff response to alarms
(iii) Fire Confinement
(iv) Occupant evacuation of the immediate area
(v) Occupant evacuation of Individual smoke compartment
(vi) Total building evacuation
(vii) Fire extinguishment.

(e) BUILDING EVACUATION SUPERVISOR: The Owner / Occupier shall appoint a Building Evacuation Supervisor for conducting and documenting results of periodical Fire Drills for compliance of timed egress provisions in the NBC.

(f) FIRE DRILLS: Fire drills shall be conducted once in every month and shall include the employees and staff members of all shifts. Fire Drills shall include assignment of staff to close doors where necessary to prevent spread of smoke or fire, to search the lavatories or other rooms, to account for all occupants, to achieve prompt, quiet, orderly evacuation of the building or relocation to area of refuge, (refer Annexure - E part - 4 of NBC of India, 2005).

137. OTHER STIPULATIONS

(Reproducing as provisioned in department draft guidelines)

(a) INSPECTION: Inspections shall be undertaken at periodic intervals as below:

The inspection of High Rise Building shall be conducted once in a year for the issuance of renewal of No Objection Certificate for occupancy. A certificate to the effect that all the required fire safety measures are provided and functioning satisfactorily shall be enclosed to the application duly signed by the Fire Protection Engineer for considering the renewal of No Objection Certificate for occupancy. Random checks will be done by the State Disaster Response & Fire Services Department.

Periodical Inspection by the officers of State Disaster Response & Fire Services Department shall be once in six months after receipt of certificate as above and it is the responsibility of the Management to ensure that all fire prevention and Safety Systems installed are maintained in good working condition.

(b) INSURANCE: The builder shall duly insure all the occupiers (i.e., Doctors, Nurses, employees, patients, visitors, attendants and emergency service personnel etc.) of High Rise Hospital including Building and equipment against

all Disasters after obtaining No Objection Certificate for Occupancy from Fire Services Department.

(c) **MAINTENANCE & MANAGEMENT:** Such High Rise Hospital Building shall be under the overall control and management of a single management body who shall be responsible for the fire and life safety. Maintenance shall comply with applicable standards and NFPA.

(d) **PENALTIES:** The owner/firm or occupier and Fire Protection Engineer of the premises who contravenes these stipulations shall be guilty of an offence and is liable for penal action under Section 31 of the A.P. Fire Service Act, 1999 and other relevant laws.

138. PLANNING AND EXECUTION

(a) The Fire Prevention and Life safety requirements shall be met by engaging the services of an experienced engineering firm with a track record of having designed and executed minimum five such Buildings of similar in height as per NFPA. Apart from providing facilities for undertaking external firefighting measures, internal fire safety and protection measures are required to be provided and maintained as given in these stipulations. (NFPA-1-17.8.4.5, NFPA – 1031-5.7)

(b) The designer shall ascertain local conditions like availability of Water, reliable power, material and equipment certified to be fit for fire service, maintenance resources, traffic conditions, communications, record of compliance of similar hospitals and any additional information provided by the Department. He shall be familiarized with nature of occupants including non- patients who would have to be safely exited in emergencies. He shall confirm and explain how the above have been factored in the design.

(c) Adverse local conditions, known to have contributed to poor compliance with fire safety shall have mandatory to be factored in by stipulating possible compensative measures to ensure effective compliance, enforcement and provide for human errors, duly considering local constraints, so that safety is not compromised and INTENT of any code provision is not violated. The above is in line with, sec.13 of AP Fire Act, CL.10 part-2 of NBC and NFPA – 1.

(d) Intelligent Smoke management to ensure safe evacuation and non-erasable record of alarm to monitor integrity of critical safety equipment like Sprinkler system, Public Address system and emergency generators shall be provided.

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CHAPTER-X-5

GREEN BUILDINGS AND SUSTAINABILITY PROVISIONS

139. Green Buildings

(1) Modern buildings consume about 25 to 30 percent of total energy, and up to 30 percent of fresh potable water and generate approximately 40 percent of total waste.

(2) As defined by the Indian Green Building Council (IGBC), **a green building is "one which uses less water, optimizes energy efficiency, conserves natural resources, generates less waste and provides healthier spaces for occupants, as compared to a conventional building."**

(3) Green buildings must be environmentally responsible from siting and design to construction, maintenance, renovation and demolition. The first and most widely used ratings system internationally is the American "Leadership in Energy and Environmental Design" (LEED) system.

(4) The institutional frameworks for green buildings in India have developed rating systems that classify green buildings according to their performance on a number of set parameters. In India, the IGBC has adapted LEED to create LEED India and is responsible for certifying buildings under this system. At present, IGBC offers two certifications for office buildings.

(a) LEED for New Construction and Major Renovations: For buildings where the design and operation is fully in the scope and control of owner or developer.

(b) LEED for Core and Shell: Certifies buildings where the owners or developers do not control all aspects of design and construction, e.g. Leased spaces like malls or offices where tenants have control over internal space and may opt for additional green interiors.

(5) LEED points are awarded under five categories for a total of 100 points –

(a) Sustainable sites,

(b) Water efficiency,

(c)Energy and atmosphere,

(d) Materials and resources

(e) Indoor environmental quality.

There are 6 additional points under innovation in design and 4 for regional priority.

(6) Buildings qualify for four levels of certification:

(a) Certified: 40-49 points,

(b) Silver: 50-59 points;

(c)Gold: 60-79 points;

(d) Platinum: 80+ points.

(7) The Energy and Resources Institute (TERI) has developed its own ratings system "**Green Rating for Integrated Habitat Assessment" (GRIHA).**

(8) GRIHA differs from LEED mainly in that it accounts for features unique to India – for example, the use of non- or partially air conditioned buildings and puts emphasis on local and traditional construction knowledge. Therefore LEED and GRIHA ratings might not be directly comparable.

(9) In 2007, the Bureau of Energy Efficiency (BEE) launched the voluntary Energy Conservation Building Code (ECBC) that sets minimum energy standards for new commercial buildings having a connected load of 500 KW or contract demand of 600 KVA or more.

(10) In alignment with the priorities of the National Action Plan on Climate Change, BEE has insisted on the State Governments to make the ECBC mandatory. **Accordingly the Government of Andhra Pradesh while adopting the Energy Conservation Building Code (ECBC) amended the Andhra Pradesh Building Rules, 2012 and issued the notification in G. O. Ms. No. 30 Dated: 28.01.2014**. (see Annexure).

(11) Construction costs: On average, estimates show a gold certified building in India costs between 3 to 7 percent more to build, while platinum costs 12 to 18 percent more and silver only about 2 percent more.

(12) User savings: In terms of running costs savings, green buildings save 25-35 percent on energy use on average and 30 to 85 percent on water consumption annually.

140. Applicability and Provisions:

(1) All Buildings on various plot sizes above 300sq.m may comply with the green norms and confirm to the requirements mandatory for sanction as mentioned in this Chapter.

(2) The **"Andhra Pradesh Energy Conservation Building Code (APECBC)" [Amended Andhra Pradesh Building Rules, 2012] issued in G. O. Ms. No. 30 Dated: 28.01.2014** is applicable to commercial buildings and other Non-Residential Buildings that have a plot area of more than 1000 Square Meters or built up area of 2000 Square Meters and certain categories of buildings such as Multiplexes, Hospitals, Hotels and Convention Centers irrespective of their built up area.

(3) The provisions for green buildings indicated in the table below are applicable on all plots more than 300sq. m in size:

TABLE – 34

Applicability and Provisions for various plot sizes (all use premises) for Green Building Components

Plot Category	Sub-category	Applicable plot area (Sq. m.)	Provisions for Residential	Provisions for Non-Residential

(A)	(B)	(C)	(D)	(E)
I		Below 300	Nil	Nil
II	a	300 to 500	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) **(2). Solar Energy Utilization** (b) Installation of Solar Assisted Water Heating Systems (Optional) **(4). Waste Management**	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) **(2). Solar Energy Utilization** (b) Installation of Solar Assisted Water Heating Systems **(4). Waste Management**
	b	500 to 1,000	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (d) Reduction of Hardscape **(2). Solar Energy Utilization** (b) Installation of Solar Assisted Water Heating Systems **(3). Energy Efficiency** (c) Lighting of common areas by Solar Energy/LED devices **(4). Waste Management** (a) Segregation of Waste	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (d) Reduction of Hardscape **(2). Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels (b) Installation of Solar Assisted Water Heating Systems **(3). Energy Efficiency** (c) Lighting of common areas by Solar Energy/LED devices
	c	**1,000 to 3,000**	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (c) Waste Water Recycle and Reuse (d) Reduction of Hardscape **(2). Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels (b) Installation of Solar Assisted Water Heating Systems **(3). Energy Efficiency** (b) Energy Efficiency in HVAC systems (c) Lighting of common areas by Solar	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (c) Waste Water Recycle and Reuse (d) Reduction of Hardscape **(2). Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels (b) Installation of Solar Assisted Water Heating Systems **(3). Energy Efficiency** (b) Energy Efficiency in HVAC systems (c) Lighting of common areas by Solar

III	**a**	**Above 3,000**	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (b) Low Water Consumption Plumbing Fixtures (c) Waste Water Recycle and Reuse (d) Reduction of Hardscape **(2). Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels (b) Installation of Solar Assisted Water Heating Systems **(3) Energy Efficiency** (a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances) (b) Energy Efficiency in	**(1). Water Conservation and Management** (a) Rain Water Harvesting (by Recharge) (b) Low Water Consumption Plumbing Fixtures (c) Waste Water Recycle and Reuse (d) Reduction of Hardscape **(2). Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels (b) Installation of Solar Assisted Water Heating Systems **(3) Energy Efficiency** (a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances) (b) Energy Efficiency in

141. Provisions for Sanction of Building Application:

(1) Water Conservation and Management

(a) Rain Water Harvesting (by Recharge)

(b) Low Water Consumption Plumbing Fixtures

(c) Waste Water Recycle and Reuse

(d) Reduction of Hardscape

(2) Solar Energy Utilization

(a) Installation of Solar Photovoltaic Panels

(b) Installation of Solar Assisted Water Heating Systems

(3) Energy Efficiency

(a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances)

(b) Energy Efficiency in HVAC systems

(c) Lighting of common areas by Solar Energy/LED devices

(4) Waste Management

(a) Segregation of Waste

(b) Organic Waste Management

142. Provisions for City and Site level greening:

(1) Greening

In alignment with ***National Sustainable Habitat Mission***, the Authority shall encourage augmentation of green cover in the city/plot, by following:

The Urban Greening Guidelines, 2014 and other provisions are as given below –

(a) Provision of minimum 1 tree/every 80sqmt of plot area for plot sizes >100sqmt and planted within the setback of the plot.

(b) Compensatory Plantation for felled/transplanted tress in the ratio 1:3 within the premises under consideration.

(c) Choice of species for plantation in site and abutting the road to be adopted as per Section 8 of the *Urban Green Guidelines, 2014*.

(d) The unpaved area shall be more than or equal to 20% of the recreational open spaces.

(2) Water Re-use and Recycling

All building having a minimum discharge of 15,000 liters and above per day or premises consisting of 25 dwelling units and above shall incorporate waste water recycling system. The recycled water should be used for horticultural purposes.

(3) Solar Energy Roof Top Installations

The detailed specifications of the Solar Energy Roof Top Buildings are given in the Policy for Solar Energy Roof Top Buildings which need to be followed.

143. Sustainable Waste Management:

(1) *Zero Waste* is a concept of waste management and planning approaches that emphasize waste prevention as opposed to end waste management. This means restructuring production and distribution systems, designing and managing products and processes to systematically follow the 3R rule of Reduce, Re-use and Re-cycle the volume of waste, to conserve and recover all used resources, and therefore eliminating all discharges to landfills, and prevent air, water and land pollution.

(2) Zero Waste/ land-fill can be achieved by adopting systematic approach of segregation at source by planning, by collection facilitation and most importantly by creating public awareness.

(3) The green waste can be converted into fuel cakes, kitchen waste into manure, construction & demolition waste into bricks, plastic waste into oil, paper, glass and steel back into the same and all residual inert materials can also be converted into bricks.

(4) Achieving zero land-fill is more conveniently possible, if

(a) The collection is made from house to house and some segregation is done at household level and

(b) Separate wet and dry bins must be provided at the ground level.

(c) The recycling is done at decentralized, say, ward or even lower levels.

144. Sustainability of Building Materials:

(1) Sustainability of natural resources for building materials shall be ensured through conservation of available natural resources and use of supplementary materials such as industrial/agricultural by-products, renewable resources, and factory made building components and recycled construction and demolition waste.

(2) Supplementary building materials (derived or processed waste) shall be suitably used in combination with conventional resources offers dual advantages in purview of health & environmental benefits.

(3) Use of Factory made pre-fab/pre-cast and recycled components with *Green benefits*:

(a) Panels, hollow slabs, hollow blocks–etc. - conservation of materials, less water requirement.

(b) Fly Ash bricks, Portland Pozzolana cement, Fly ash concrete, phosphor-gypsum based walling & roofing panels, particle wood – recycled use of industrial/ agricultural by-products.

(c) Fly ash/ AAC (Autoclaved aerated light weight concrete) panels/ CLC (Cellular light weight concrete) panels- ensures thermal comfort (significant reduction in air conditioning requirement)

(d) Use of bamboo & rapidly growing plantation timbers- environmental benefits.

(4) Local materials are generally suitable for prevailing geo-climatic conditions & have advantage of low transportation cost & time.

(5) Sustainable use of building materials shall be encouraged which may combine certain mandatory provisions and incentives.

145. Incentives for the Green Buildings:

The following incentives may be given by the Local Body to those buildings which follow the guidelines issued in the "Andhra Pradesh Energy Conservation Building Code (APECBC)" [Amended Andhra Pradesh Building Rules, 2012] issued in G. O. Ms. No. 30 Dated: 28.01.2014 and obtaining the ratings from the LEED or LEED India or TERI or GRIHA as stated above in these Rules.

(1) 20% Reduction on Permit Fees.

(2) Payment of Impact Fee, City Level Infrastructure Impact Fee and Development Charges to be paid in four equal instalments before the Completion Period of the construction as given in the Building Permit Order. The applicant shall submit the postdated cheques before release of the Building.

(3) If the property is sold within three years, one-time reduction of 20% on Duty on Transfer of Property (Surcharge on Stamp Duty) on the submission of Occupancy Certificate issued by the Local Authority.

146. Procedure for obtaining the incentives:

(1) The applicant shall submit the Building Application with all relevant Plans, Documents and Certificates required as per the details given in these Rules.

(2) In order to obtain the incentives, the applicant shall submit an Undertaking along with the for Building Application duly signed by the architect, landscape architect, structural engineer, electrical engineer, plumber and environmental engineer that the building plans are prepared based on the guidelines given in the "Andhra Pradesh Energy Conservation Building Code (APECBC)" [Amended Andhra Pradesh Building Rules, 2012] issued in G. O. Ms. No. 30 Dated: 28.01.2014 and also the provisions as stated in these rules.

(3) The applicant shall submit an undertaking that he will provide all the requirements as stipulated and shall obtain and enclose a certificate from the LEED or LEED India or TERI or GRIHA which shall certify that the building plans submitted are eligible to be considered under green buildings category.

(4) The Building shall be constructed as per the Sanctioned Plans and the applicant along with the Building Completion Notice shall submit the Certificate obtained from the Agency giving Rating for Green Buildings so as to consider the issue of Occupancy Certificate.

(5) The Local Authority / Sanction Authority shall constitute a committee to examine the details with regard to the fulfilment of guidelines issued in the Andhra Pradesh Energy Conservation Building Code and the parameters as stipulated so as to consider the incentives duly fixing certain guidelines with the approval of the competent authority.

(6) If the applicant fails to complete the building as per the sanctioned plans duly following the guidelines, the concessions given shall be withdrawn and an additional 25% of the Total Building Permit Fee shall be levied.

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CHAPTER-XI-1

RAIN WATER HARVESTING STRUCTURES

147. GENERAL:

(1) Rain water harvesting is the technique of collection and storage of rain water at surface or in sub-surface aquifers, before it is lost as surface run-off. The augmented resource can be harvested in the time of need.

(2) Artificial recharge to ground water is a process by which the ground water reservoir is augmented at rate exceeding that under natural conditions of replenishment.

148. NEED:

(1) To overcome the inadequacy of water to meet our demands.
(2) To arrest decline in ground water levels.
(3) To enhance availability of ground water at specific place and time and utilize rain water for sustainable development.
(4) To increase infiltration of rain water in the subsoil which has decreased drastically in urban areas due to paving of open area
(5) To improve ground water quality by dilution.
(6) To increase agriculture production.
(7) To improve ecology of the area by increase in vegetation cover, etc.

149. ADVANTAGES:

(1) Cost of recharge to sub-surface reservoir is lower than surface reservoirs.
(2) The aquifer serves as distribution system also.
(3) No land is wasted for storage purpose and no population displacement is involved.
(4) Ground water is not directly exposed to evaporation and pollution.
(5) Storing water underground is environment friendly.
(6) It increases the productivity of aquifer.
(7) It reduces flood hazards.
(8) Effects rise in ground water levels.
(9) Mitigates the effects of drought.
(10) Reduces soil erosion.

150. METHODS:

The methods of ground water recharge mainly are:

(1) Urban Areas - Roof Top Rain Water /Storm runoff harvesting through

(a) Recharge Pit
(b) Recharge Trench
(c) Tube well
(d) Recharge Well

(2) Rural Areas - Rain Water Harvesting through

(a) Gully Plug
(b) Contour Bund
(c) Gabion Structure
(d) Percolation tank
(e) Check Dam/ Cement Plug/ Nala Bund
(f) Recharge shaft
(g) Dug well Recharge
(h) Ground Water Dams/Subsurface Dyke

151. TECHNIQUES:

(1) URBAN AREAS

In urban areas, rain water available from roof tops of buildings, paved and unpaved areas goes waste. This water can be recharged to aquifer and can be utilized gainfully at the time of need. The rain water harvesting system needs to be designed in a way that it does not occupy large space for collection and recharge system. A few techniques of roof top rain water harvesting in urban areas are described below.

(a) ROOF TOP RAIN WATER HARVESTING THROUGH RECHARGE PIT

(i) In alluvial areas where permeable rocks are exposed on the land surface or at very shallow depth, roof top rain water harvesting can be done through recharge pits.

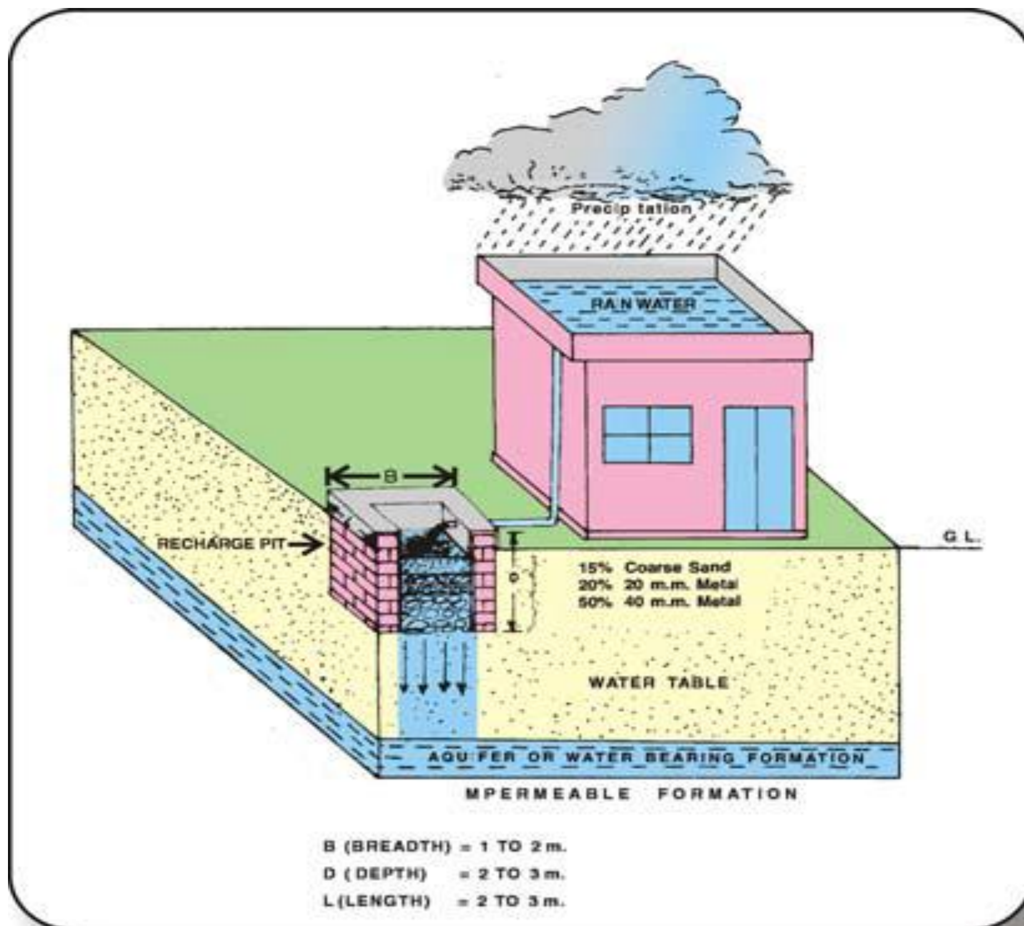
(ii) The technique is suitable for buildings having a roof area of 100 sq. m and are constructed for recharging the shallow aquifers.

(iii) Recharge Pits may be of any shape and size and are generally constructed 1 to 2m wide and 2 to 3m deep which are back filled with boulders (5-20 cm), gravels (5-10mm) and coarse sand (1.5-2mm) in graded form. Boulders at the bottom, gravels in between and coarse sand at the top so that the silt content that will come with runoff will be deposited on the top of the coarse sand layer and can easily be removed. For smaller roof area, pit may be filled with broken bricks/ cobbles.

(iv) A mesh should be provided at the roof so that leaves or any other solid waste / debris is prevented from entering the pit and a de-silting /collection chamber may also be provided at the ground to arrest the flow of finer particles to the recharge pit.

(v) The top layer of sand should be cleaned periodically to maintain the recharge rate.

(vi) By-pass arrangement has to be provided before the collection chamber to reject the first showers.



(b) ROOF TOP RAIN WATER HARVESTING THROUGH RECHARGE TRENCH

(i) Recharge trenches are suitable for buildings having roof area of 200-300 sq. m. and where permeable strata are available at shallow depths.

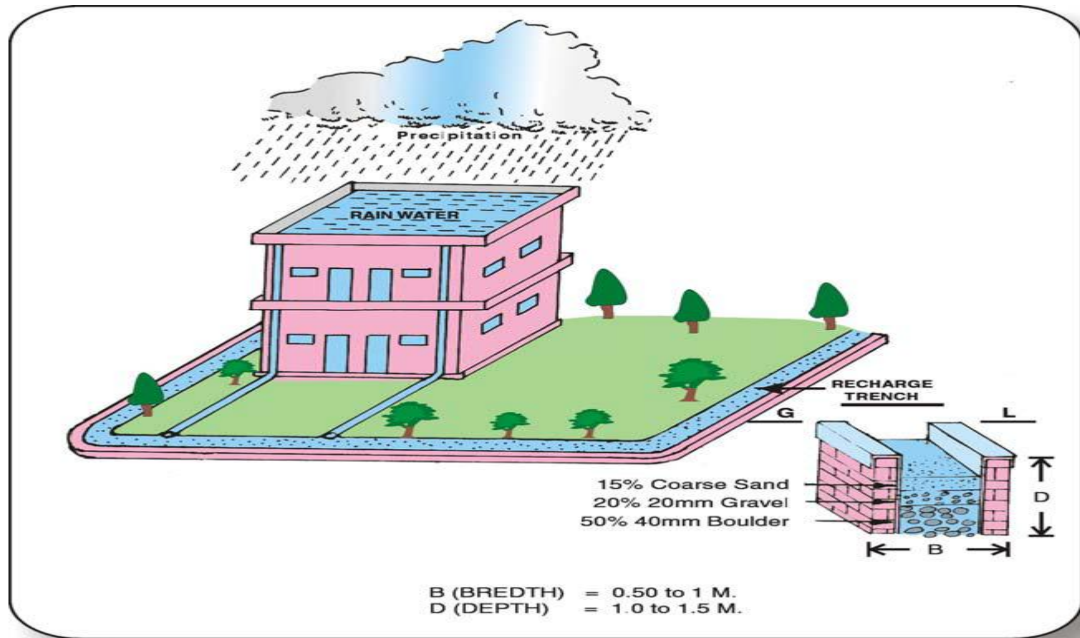
(ii) Trench may be 0.5 to 1 m wide, 1 to 1.5m deep and 10 to 20m long depending upon the availability of water to recharge.

(iii) These are back filled with boulders (5-20cm), gravel (5-10mm) and coarse sand (1.5-2mm) in graded form – boulders at the bottom, gravel in between and coarse sand at the top so that the silt content that will come with runoff will be coarse sand at the top of the sand layer and can easily be removed.

(iv) A mesh should be provided at the roof so that leaves or any other solid waste/debris is prevented from entering the trenches and a de-silting/collection chamber may also be provided on ground to arrest the flow of finer particles to the trench.

(v) By-pass arrangement be provided before the collection chamber to reject the first showers.

(vi) The top layer of sand should be cleaned periodically to maintain the recharge rate.



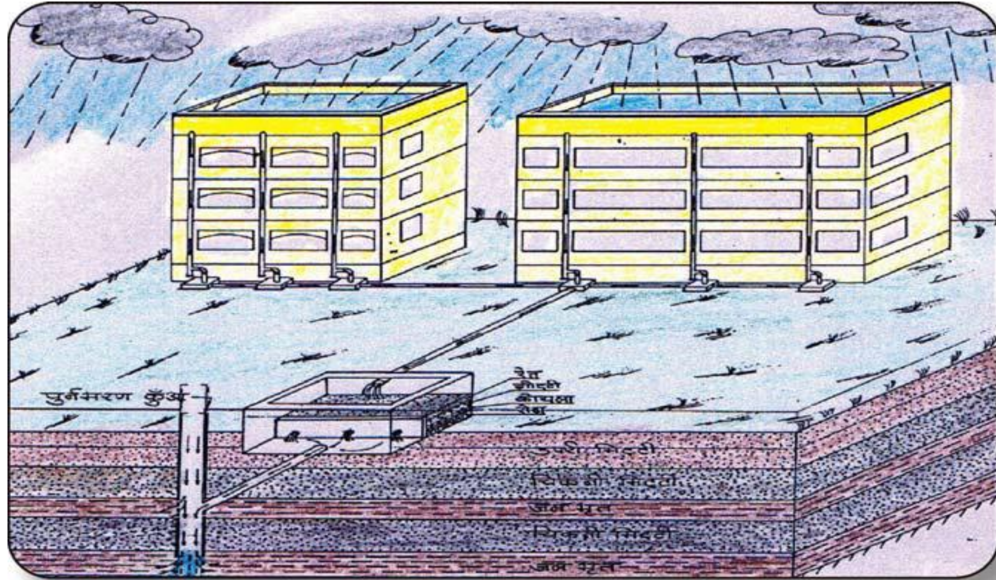
(c) ROOF TOP RAIN WATER HARVESTING THROUGH EXISTING TUBEWELLS

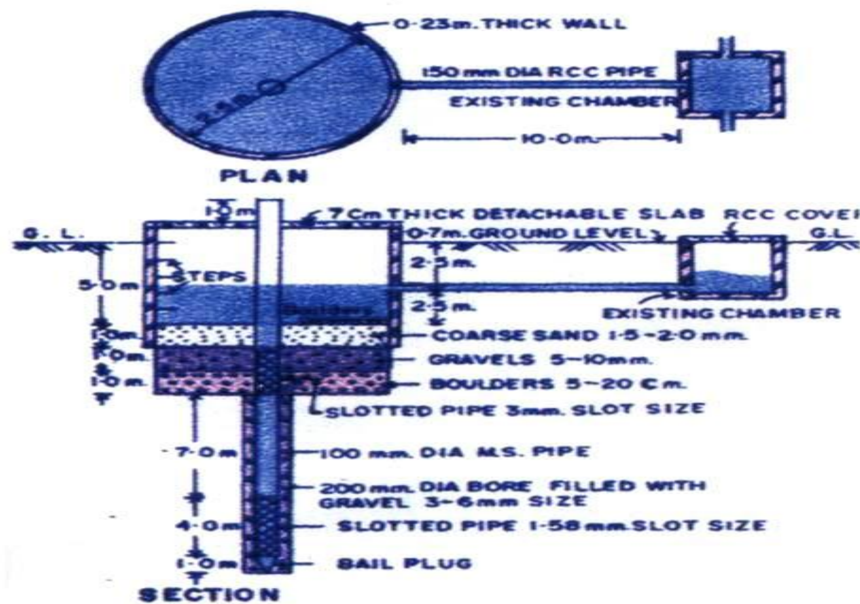
(i) In areas where the shallow aquifers have dried up and existing tube wells are tapping deeper aquifer, roof to rain water harvesting through existing tube well can be adopted to recharge the deeper aquifers.

(ii) PVC pipes of 10cm dia are connected to roof drains to collect rainwater. The first roof runoff is let off through the bottom of drainpipe. After closing the bottom pipe, the rainwater of subsequent rain showers is taken through a T to an online PVC filter. The filter may be provided before water enters the tube wells. The filter is 1–1.2m in length and is made up of PVC pipe. It's diameter should vary depending on the area of roof, 15cm if roof area is less than 150sq m and 20cm if the roof area is more. The filter is provided with a reducer of 6.25cm on both the sides. Filter is divided into three chambers by PVC screens so that filter material is not mixed up. The first chamber is filled up with gravel (6-10mm), middle chamber with pebbles (12-20mm) and last chamber with bigger pebbles (20-40mm).

(iii) If the roof area is more, a filter pit may be provided. Rainwater from roofs is taken to collection/de-silting chambers located on ground. These collection chambers are interconnected as well as connected to the filter pit through pipes having a slope of 1:15. The filter pit may vary in shape and size depending upon available runoff and are back-filled with graded material, boulder at the bottom, gravel in the middle and sand at the top with varying

thickness (0.30-0.50m) and may be separated by screen. The pit is divided into two chambers, filter material in one chamber and other chamber is kept empty to accommodate excess filtered water and to monitor the quality of filtered water. A connecting pipe with recharge well is provided at the bottom of the pit for recharging of filtered water through well.





(d) ROOF TOP RAIN WATER HARVESTING THROUGH TRENCH WITH RECHARGE WELL

(i) In areas where the surface soil is impervious and large quantities of roof water or surface runoff is available within a very short period of heavy rainfall, the use of trench/ pits is made to store

the water in a filter media and subsequently recharge to ground water through specially constructed recharge wells.

(ii) This technique is ideally suited for area where permeable horizon is within 3m below ground level.

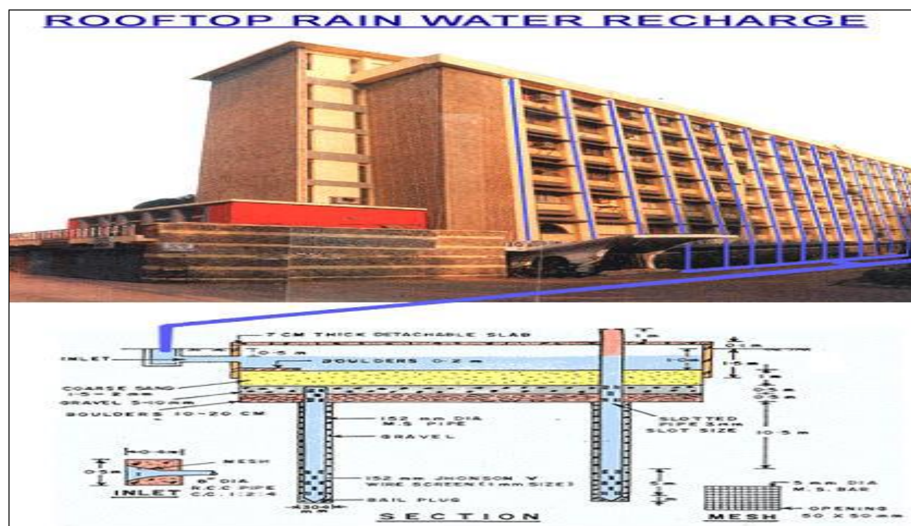
(iii) Recharge well of 100-300 diameter is constructed to a depth of at least 3 to 5m below the water level. Based on the lithology of the area well assembly is designed with slotted pipe against the shallow and deeper aquifer.

(iv) A lateral trench of 1.5 to 3m width and 10 to 30m length, depending upon the availability of water is constructed with the recharge well in the centre.

(v) The number of recharge wells in the trench can be decided on the basis of water availability and local vertical permeability of the rocks.

(vi) The trench is backfilled with boulders, gravels and coarse sand to act as a filter media for the recharge wells.

(vii) If the aquifer is available at greater depth say more than 20m, a shallow shaft of 2 to 5m diameter and 3-5m deep may be constructed depending upon availability of runoff. Inside the shaft a recharge well of 100-300mm dia is constructed for recharging the available water to the deeper aquifers. At the bottom of the shaft a filter media is provided to avoid choking of recharge well.



152. **Procedure for Obtaining Building Permission for all commercial, public buildings and new buildings on plots of 300sq.m and above:**

(1) It is mandatory to construct Rain Water Harvesting Structures in all commercial, public buildings and new buildings on plots of 300sq.m and above. Clearance of plan for the construction of new buildings of the aforesaid

categories shall only be given if they have a provision in the building design itself for Rain Water Harvesting Structures.

(2) The applicant shall submit the Building Application duly paying necessary fee and charges along with the documents as prescribed. The detailed site plan and the location plan shall show the details of rain water harvesting structures proposed in the site and also submit the detailed cross sections of the rain water harvesting structures.

(3) The applicant shall submit an undertaking that he shall construct the said structures before applying for the Occupancy Certificate and shall continuously maintain the structures for the purpose for which they are meant.

(4) On submission of the Completion Certificate submitted by the applicant for issue of the Occupancy Certificate, the Commissioner/Person authorized for this purpose shall inspect the site to check the construction of Rain Water Harvesting Structures as per the sanctioned Building Plans.

(5) The indicative provisions for rainwater harvesting by building types shall be as given in the Table below.

TABLE – 35				
PROVISIONS FOR RAINWATER HARVESTING BY BUILDING TYPES				
S. No.	**Category/Use**	**Area of the Plot (sq. m)**	**Provisions to be made**	**Other conditions**
(A)	**(B)**	**(C)**	**(D)**	**(E)**
1	**Residential Plotted Houses**			
	New Proposals	200 and above	Construction of Rain Water Harvesting Structure.	Shall have emphasis on both storage and reuse.
2	**Group Housing**			
	New Proposals	All Plot Sizes	(i) Construction of Rain Water Harvesting Structure. (ii) Concrete paving to be avoided and permeable materials are to be used for all open parking spaces.	Should indicate the system of Storm Water Drainage, Rain Water Harvesting Structure and Recharging well.
3	**Public and Semi Public Buildings**			
	All Proposals	All Plot Sizes	(i) Construction of Rain Water Harvesting Structure and storage. (ii) Shall have Recharge Pits.	Shall have emphasis on both storage and reuse.
4	**Commercial/Mixed Use**			
	All Proposals	All Plot Sizes	(i) Construction of Rain Water Harvesting Structure. (ii) Soft landscape provisions and open spaces with percolation pits. (iii) Common treatment plant to be made part of the integrated development.	(i) Shall have emphasis on both storage and reuse. (ii) Should indicate the system of Storm Water Drainage, Rain Water Harvesting Structure and Recharging well.
5	**Industrial**			
	All Proposals	All Plot Sizes	(i) Construction of Rain Water Harvesting Structure. (ii) Soft landscape provisions and open spaces with percolation pits. (iii) Use of abandoned bore well for recharging of ground water. (iv) Common treatment plant to be made part of the integrated development.	(i) Should indicate the system of Storm Water Drainage, Rain Water Harvesting Structure and Recharging well. (ii) Provision should be made not to inject contaminate water into recharge structures in industrial areas and care is to be taken to keep such structures away from sewer lines, septic tanks, soak pits, land fill and other sources of contamination.
6	**Other Proposals**	All Plot Sizes	Similar as above	Similar as above
Note: The number of recharge bores to be provided in different plot sizes shall be accordance with the Environmental Conditions for building and construction vide Tables 37, 38 and 39.				

153. Payment of fees in case of Rain Water Harvesting Structures:

Necessary fees or charges shall be paid as levied for construction of Rain Water Harvesting Structures along with the Building Application.

154. Security Deposit:

(1) The applicant shall deposit an amount as prescribed towards the construction of rain water harvesting structures along with the Building Application which is refundable on successful construction of the rain water harvesting structure and submission of detailed photographs and a certificate to that extent while applying for Occupancy Certificate.

(2) In case of failure in construction of rain water harvesting structures the security deposit shall be forfeited and the ULB shall construct the rain water harvesting structures in the said premises duly utilizing the security deposit.

155. Penalty in case of failure in construction of Rain Water Harvesting Structures by the Owners:

In case of failure in construction of the rain water harvesting structures by the applicant, the ULB shall levy a penalty equivalent to additional 10% of Property Tax till the rain water harvesting structures are constructed and maintained.

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CHAPTER-XI - 2

SOLAR ENERGY SYSTEMS IN BUILDINGS

156. Applicability:

(1) In case of new buildings proposed for construction with plot area more than 1000sq.m and all public buildings, the Solar Roof Top Systems shall be installed.

(2) It is compulsory to install Solar Photo Voltaic Panels for the required lighting in the common areas in the following categories.

(i) Banquet Halls, Function halls, Kalyanamandapams and buildings intended for similar use.

(ii) Barracks of armed forces, paramilitary forces and police.

(iii) Functional Buildings of Railway Stations and Air Ports like waiting rooms, retiring rooms, rest rooms, and inspection bungalows and catering units.

(iv) Government/Semi-Government and Institutional buildings.

(v) Hospitals and Nursing Homes.

(vi) Hostels of Schools, Colleges and Training Centers with more than 100 Students.

(vii) Hotels, Lodges, and Guest Houses, Group Housing with the plot area of 3000 sq. m.

(3) It is mandatory to use the Solar Water Heating System in all the buildings stated above and also in case of all other buildings having plot area more than 1000sq.m and all public buildings.

157. Types of Solar Energy Systems for Buildings:

(1) Installation of Solar Photo Voltaic Panels:

(a) Solar Photo Voltaic (SPV) systems are direct energy conversion systems that convert solar radiation into electric energy.

(b) SPV systems should be installed to reduce use of conventional sources of energy.

(c) Roof tops of buildings as well as other exposed areas such as of parking shades should be utilized for installation of SPV systems.

(2) Installation of Solar Assisted Water Heating Systems

Hot water requirement in buildings may be met through use of various types of solar water heating systems, viz. flat plate collector: single glazed; double glazed; evacuated tube collectors; and Water heating with solar concentrators.

158. Area norm for Roof Top and Capacity of Solar Photo voltaic Power plant to be installed:

TABLE – 36

Area norm for Roof Top and Capacity of Solar Photo voltaic Power plant

S. No.	Category of buildings/Plot area	Area norm for Roof Top and Capacity of Solar Photo voltaic Power plant to be installed*
(A)	(B)	(C)
1	All residential buildings having plot area of more than 1000 sq.mts.	**Minimum 12sq.m area on roof** Minimum1 Kilo Watt peak (KWp) or 5% of connected load whichever is higher.
2	All private Educational Institutions, Schools, Colleges, Hostels, Technical / Vocational Education Institutes, Universities etc. having connected load of 30 Kilo Watt (KW) and above.	**Minimum 60sq.m area on roof** Minimum 5 Kilo Watt peak (KWp) or 5% of connected load whichever is higher.
3	All Government Buildings and Offices, Government Colleges, District Institute of Education and Training (DIET), Government Educational Institutions, Universities etc. having connected load of 30 Kilo Watt (KW) and above.	**Minimum 25sq.m area on roof** Minimum 2 Kilo Watt peak (KWp) or 5% of connected load whichever is higher.
4	All private Hospitals and Nursing Homes, Industrial Establishments, commercial Establishments, Malls, Hotels, Banquet Halls and Tourism complexes having connected load. (i) of 50 Kilo Watt (KW) to 1000 Kilo Watt (KW). (ii) above 1000 Kilo Watt (KW).	**Minimum 120sq.m on roof** (i) Minimum 10 Kilo Watt peak (KWp) or 5% of connected load whichever is higher. **Minimum 600sq.m on roof** (ii) Minimum 50 Kilo Watt peak (KWp) or 5% of connected load whichever is higher.
5	Al new housing complexes, developed by Group Housing Societies, Builders, Housing Boards, on a plot size of: (i) 0.75 Acre to 1.0 Acre (ii) More than 1.0 Acre to 2.0 Acre (iii) More than2.0 Acres to 5.0 Acres (iv) More than 5.0 Acres.	**Minimum120sq.m on roof area to 480sq.m depending on the KWp** (i) Minimum 10 Kilo Watt peak (KWp) (ii) Minimum 20 Kilo Watt peak (KWp) (iii) Minimum 30 Kilo Watt peak (KWp) (iv) Minimum 40 Kilo Watt peak (KWp)
The area requirement on roof top has been calculated @12sq.mper 1 KWp as suggested by Ministry of New and Renewable Energy.		

159. Guidelines for installation of Solar Water Heating Systems:

In order to facilitate the installation of the solar water heating systems, the buildings shall have the following provisions:

(1) The capacity of solar water heating system to be installed on the building of different categories shall be decided in consultation with the NREDCAP [New

and Renewable Energy Development Corporation of A.P. Ltd] or as per the guidelines issued by NREDCAP from time to time.

(2) The capacity of the solar water heating system to be installed on the building shall be described on the basis of the average occupancy of the building. The recommended minimum capacity shall not be less than 25litres per day for each bathroom and kitchen subject to the condition that maximum of 50% of the total roof area is provided with the system.

(3) Specifications: Installation of Solar Assisted Water Heating Systems shall conform to BIS specification IS 12933 or the latest BIS specification. The solar collectors used in the system shall have the BIS certification mark.

(4) Auxiliary System: Wherever hot water requirement is continuous, auxiliary heating arrangement either with electric elements or oil of adequate capacity can be provided.

(5) All such buildings where solar water heating systems are to be installed will have open sunny roof area available for installation of solar water heating system.

(6) The roof loading adopted in the design of such building should be at least 50 kg per sq. m. for the installation of solar water heating system.

(7) The building must have a provision for continuous water supply to the solar water heating system.

(8) A solar water heating system should be integrated with the building design. These should either be put on the parapet or could be integrated with the south facing vertical wall of the building.

(9) The best inclination of the collector for regular use throughout the year is equal to the local latitude of the place. The Collectors should be facing south-west. However, for only winter use the optimum inclination of the Collector would be (Latitude +15 degrees of the south).

(10) Even if the Collectors are built in south facing vertical wall of building the output from such Collectors during winter month is expected to be within 32% output from the optimum inclined Collector.

(11) All the new buildings to be constructed shall have an installed hot water line from the roof top and insulated distribution pipelines to each of the points where hot water is required in the building.

(12) All new buildings must complete installation of solar roof top systems before obtaining the Occupancy Certificate from the ULB.

160. Procedure for Obtaining Building Permission for all buildings having a plot area more than 1000sq.m. and all public buildings:

(1) In order to obtain Building Permission for any building having plot area more than 1000sq.m and in all public buildings, after obtaining the necessary technical clearance from the NREDCAP the application shall be submitted to the ULB in the prescribed form duly incorporating the solar roof top system in the plans along with the details as given in the Rules.

(2) Clearance of plan for the construction of new buildings of the aforesaid categories shall only be given if they have a provision in the building design itself for an insulated pipeline from the rooftop in the building to various di stribution points where hot water is required.

(3) NREDCAP Department shall act as a Nodal Agency. The Nodal Agency and/or designated offices by the Nodal Agency shall be responsible for the following activities:

   (a) To guide the applicant to install the appropriate Solar Roof Top System depending on the size and usage of the buildings on gross or net meter basis.

   (b) To facilitate and process the proposals for availing subsidy if any for solar roof top systems as per MNRE guidelines.

   (c) To develop an online system for acceptance and clearance of applications and for providing status updates.

161. Payment of fees in case of Solar Power Roof Top Systems:

No fees or charges shall be levied for installation of Solar Power Roof Top Systems.

162. Security Deposit:

(1) The applicant shall deposit an amount as prescribed by the ULB/NREDCAP towards the full value of the construction Solar Power Roof Top Systems along with the Building Application which is refundable on successful construction of the Solar Power Roof Top Systems and submission of detailed photographs and a certificate to that extent while applying for Occupancy Certificate.

(2) In case of failure in construction of Solar Power Roof Top Systems before obtaining the Occupancy Certificate the security deposit shall be forfeited.

163. Penalty in case of failure in construction of Solar Power Roof Top Systems:

In case of failure in construction of the Solar Power Roof Top Systems by the applicant, a penalty equivalent to additional 10% of Property Tax shall be levied by the ULB till the Solar Power Roof Top Systems are constructed and maintained.

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CHAPTER-XI -3

CLIMATE RESILIENT CONSTRUCTION:
INTEGRATION OF ENVIRONMENTAL CLEARANCE WITH SANCTION

164. General:

Land, Air, Noise, Water, Energy, Biological/Socio-Economic/Solid/Other Waste Management are the main facets considered in relation to *Pre, During and Post* Building Construction for Sustainable Environment Management. The building construction sector is a major contributor towards carbon footprints which affects climate change. It is necessary for the building process to ensure compliance to various conditions laid down by the Ministry of Environment, Forest and Climate Change, Government of India.

165. Environmental Conditions for Compliance During Building Approvals:

(1) The Ministry of Environment, Forest and Climate Change has decided to integrate the environmental concerns into building plan approval process and empowering the concerned ULB/Development Authority/any other body authorized to sanction building plans, to approve and certify compliance of stipulated requirements.

(2) The new building construction proposals are classified in the following 3 categories:-

Category	Built Up Area (sq. m)
A	5000 – 20000
B	20000 – 50000
C	50000 – 150000

(3) The ULB/Development Authority/any other body authorized to sanction building plans shall approve the building plans by ensuring the stipulated conditions in

Table 37 (for above 5,000 sq. m and up to 20,000 sq. m),
Table 38 (for above 20,000 sq. m and up to 50,000 sq. m) and
Table 39 (for above 50,000 sq. m and up to 1,50,000 sq. m).

TABLE – 37
Environmental Conditions for Building and Construction
(Category "A": 5000 sq. m - 20000 sq. m)

S. No.	Medium	Environmental Condition	Reference Clause
(A)	**(B)**	**(C)**	**(D)**
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	
2	Water Conservations- Rain Water Harvesting and Ground Water Recharge	(a) A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sq. m of built-up area) shall be provided. (b) The rain water harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. (c) The excess rain water harvested be linked to the tube well bore in the premise through a pipeline after filtration in the installed filters.	**See Chapter on Rain Water Harvesting Structures and Table – 35 Provisions for Rainwater Harvesting by Building Types**
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**142. Provisions for City and Site level greening:** **(1) Greening** (d) The unpaved area shall be more than or equal to 20% of the recreational open spaces.
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**143. Sustainable Waste Management:** (4) (b) Separate wet and dry bins must be provided at the ground level.
4	Energy	In common areas, LED/ solar lights must be provided.	**141. Provisions for Sanction of Building Application:** (**3**) (c) Lighting of common areas by Solar Energy/LED devices.
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be	

		installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	
5 (a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it is less than 10m away, the exhaust pipe shall be taken up to 3m above the building.	
6	Green Cover	A minimum of 1 tree for every 80 sq. m of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**142. Provisions for City and Site level greening** **(1) Greening** (a) Provision of minimum 1 tree/every 80sqmt of plot area for plot sizes >100sqmt and planted within the setback of the plot.
6 (a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**142. Provisions for City and Site level greening** **(1) Greening** (b) Compensatory Plantation for felled/transplanted tress in the ratio 1:3 within the premises under consideration

TABLE - 38
Environmental Conditions for Building and Construction
(Category "B": 20000 sq. m - 50000 sq. m)

S. No.	Medium	Environmental Condition	Reference Clause
(A)	**(B)**	**(C)**	**(D)**
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	---
2	Water Conservations- Rain Water Harvesting and Ground water Recharge	A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sq. m of built-up area) shall be provided. The rain water harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rain water harvested be linked to the tube well bore in the premise	**See Chapter on Rain Water Harvesting Structures and Table – 35 Provisions for Rainwater Harvesting by Building Types**

		through a pipeline after filtration in the installed filters.	
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**142. Provisions for City and Site level greening:** **(1) Greening** (d) The unpaved area shall be more than or equal to 20% of the recreational open spaces.
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**143. Sustainable Waste Management:** (4) (b) Separate wet and dry bins must be provided at the ground level.
4	Energy	In common areas, LED/ solar lights must be provided.	**141. Provisions for Sanction of Building Application:** (**3**) (c) Lighting of common areas by Solar Energy/LED devices.
4 (a)		At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells or wind mills or hybrid should be provided.	**141. Provisions for Sanction of Building Application** **(2) Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels.
4 (b)		As per the provisions of the Ministry of New and Renewable energy solar water heater of minimum capacity 10 litres/4 persons (2.5 litres per capita) shall be installed.	**159. Guidelines for installation of Solar Water Heating Systems** (2) The recommended minimum capacity shall not be less than 25litres per day for each bathroom and kitchen subject to the condition that maximum of 50% of the total roof area is provided with the system.
4 (c)		Use of flyash bricks: Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended from time to time	**144. Sustainability of Building Materials** (3)(b) Fly Ash bricks, Portland Pozzolana cement, Fly ash concrete, phosphor-gypsum based walling & roofing panels, particle wood – recycled use of industrial/ agricultural by-products.
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	---
5 (a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it	---

		is less than 10m away, the exhaust pipe shall be taken up to 3m above the building.	
6	Green Cover	A minimum of 1 tree for every 80 sq. m of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**142. Provisions for City and Site level greening** **(1) Greening** (a) Provision of minimum 1 tree/every 80sqmt of plot area for plot sizes >100sqmt and planted within the setback of the plot.
6 (a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**142. Provisions for City and Site level greening** **(1) Greening** (b) Compensatory Plantation for felled/transplanted tress in the ratio 1:3 within the premises under consideration.

TABLE - 39

Environmental Conditions for Building and Construction

(Category "C": 50000 sq. m - 150000 sq. m)

S. No.	Medium	Environmental Condition	Reference Clause
(A)	(B)	(C)	(D)
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	---
2	Water Conservations-Rain Water Harvesting and Ground water Recharge	A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sq. m of built-up area) shall be provided. The rain water harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rain water harvested be linked to the tube well bore in the premise through a pipeline after filtration in the installed filters.	**See Chapter on Rain Water Harvesting Structures and Table – 35 Provisions for Rainwater Harvesting by Building Types**
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**142. Provisions for City and Site level greening:** **(1) Greening** (d) The unpaved area shall be more than or equal to 20% of the recreational open spaces.

2 (b)		The ground water shall not be withdrawn without approval from the competent authority.	---
2 (c)		Use of potable water in construction should be minimized.	---
2 (d)		Low flow fixtures and sensors must be used to promote water conservation.	---
2 (e)		Separation of grey and black water should be done by the use of dual plumbing system.	---
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**143. Sustainable Waste Management:** (4) (b) Separate wet and dry bins must be provided at the ground level.
3(a)		All non-degradable waste shall be handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.	---
3(b)		Organic waste composter/ vermiculture pit with a minimum capacity of 0.3 Kg/tenement/day must be installed wherein the STP sludge may be used to be converted to manure which could be used at the site or handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.	---
4	Energy	In common areas, LED/ solar lights must be provided.	**141. Provisions for Sanction of Building Application:** (**3**) (c) Lighting of common areas by Solar Energy/LED devices.
4 (a)		At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells or wind mills or hybrid should be provided.	**141. Provisions for Sanction of Building Application** **(2) Solar Energy Utilization** (a) Installation of Solar Photovoltaic Panels.

4 (b)		As per the provisions of the Ministry of New and Renewable energy solar water heater of minimum capacity 10 litres/4Persons (2.5 litres per capita) shall be installed.	**159. Guidelines for installation of Solar Water Heating Systems** (2) The recommended minimum capacity shall not be less than 25litres per day for each bathroom and kitchen subject to the condition that maximum of 50% of the total roof area is provided with the system.
4 (c)		Use of fly ash bricks: Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended from time to time.	**144. Sustainability of Building Materials** (3)(b) Fly Ash bricks, Portland Pozzolana cement, Fly ash concrete, phosphor-gypsum based walling & roofing panels, particle wood – recycled use of industrial/ agricultural by-products.
4 (d)		Use of concept of passive solar design of buildings using architectural design approaches that minimize energy consumption in buildings by integrating conventional energy-efficient devices, such as mechanical and electric pumps, fans, lighting fixtures and other equipment, with the passive design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass.	**141. Provisions for Sanction of Building Application** **(3) Energy Efficiency** (a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances) (b) Energy Efficiency in HVAC systems (c) Lighting of common areas by Solar Energy/LED devices
4 (e)		Optimize use of energy systems in buildings that should maintain a specific indoor environment conducive to the functional requirements of the building by following mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code (ECBC) 2007 of the Bureau of Energy Efficiency, Government of India.	**141. Provisions for Sanction of Building Application** **(3) Energy Efficiency** (a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances) (b) Energy Efficiency in

			HVAC systems (c) Lighting of common areas by Solar Energy/LED devices
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	---
5 (a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it is less than 10m away, the exhaust pipe shall be taken up to 3m above the building.	---
6	Green Cover	A minimum of 1 tree for every 80 sq. m of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**142. Provisions for City and Site level greening** **(1) Greening** (a) Provision of minimum 1 tree/every 80sqmt of plot area for plot sizes >100sqmt and planted within the setback of the plot.
6 (a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**142. Provisions for City and Site level greening** **(1) Greening** (b) Compensatory Plantation for felled/transplanted tress in the ratio 1:3 within the premises under consideration.
7	Sewage Treatment Plant	Sewage treatment plant with capacity of treating 100% waste water shall be installed. Treated water must be recycled for gardening and flushing.	
8	Environment Management Plan	The environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Power backup for Infrastructure, Environment Monitoring, Solid Waste Management and Solar and Energy conservation should be kept operational through Environment Monitoring Committee with defined functions and responsibility.	---

CHAPTER – XII

TRANSFERABLE DEVELOPMENT RIGHTS

166. Transferable Development Rights (TDR)

An award specifying the built up area an owner of a site or plot can sell or dispose or utilize elsewhere, whose site or plot is required to be set apart or affected for a community amenity or development for public purpose in the Master Plan or in road widening or covered in recreational use zone etc. The award would be in the form of a TDR Certificate issued by the Competent Authority.

167. Concession in Road Widening Cases

(1) Where any land or site or premises for building is affected in the Statutory Plan/Master Plan Road or Circulation network or a road required to be widened as per Road Development Plan, such area so affected shall be surrendered free of cost to the Sanctioning Authority by the owner of land. No development permission shall be given unless this condition is complied with. The applicant shall submit the undertaking for road widening in the form given below along with the Building Application.

(2) i) Upon surrendering such affected area the owner of the site would be entitled to a Transferable Development Rights (TDR) as given in Rule-168.

OR

ii) The owner shall be allowed to construct an extra floor with an equivalent built area for the area surrendered subject to mandated public safety requirements.

OR

iii) The owner shall be allowed to avail concessions in setbacks including the front set-back (subject to ensuring a building line of 6m in respect of roads 30m and above, 3m in respect of roads 18m and below 30m and 2m in respect of roads less than 18m and subject to ensuring minimum side and rear setback of 2m in case of building of height up to 12m and 2.5m in case of buildings of height above 12m and up to 15m and 3m for buildings of height above 15 and up to 18m). In case of High Rise Buildings the concessions in setbacks, other than the front setback would be considered subject to maintaining minimum clear setback of 7m on the sides and rear side and such minimum setback area shall be clear without any obstructions to facilitate movement or fire fighting vehicles and effective firefighting operation.

OR

iv) Adjustment of Land Value towards the Building Permit Fee and Charges (only in cases where Road widening is in progress).

OR

v) Adjustment of City Level Infrastructure Impact fee towards the value of the land surrendered for formation of new Master Plan Roads/Link Roads.

OR

vi) All the above individual items or Combination of i), ii) and iii) only.

(3) The extent of concessions given shall be such that the total built up area after concession shall not exceed the sum of built up area allowed (as proposed) on total area without road widening and built up area equivalent to surrendered area.

(4) In case of plots less than 750sq.m in addition to concessions in setbacks and height, the cellar floor may be allowed in site areas above 500sq. m keeping in view of its feasibility on ground.

(5) The above concessions shall be considered at the level of Sanctioning Authority/Competent Authority. The Sanctioning Authority/Competent

Authority may consider any other concession as deemed fit with the prior approval of Government.

168. Grant of Transferable Development Rights:

(1) Transferable Development Rights” (TDR) can be awarded only when such lands are transferred to the local body / Development Authority as the case may be by way of registered gift deed. The award would be in the form of a TDR Certificate issued by the Competent Authority / Sanctioning Authority.

(2) Grant of TDR can be considered by the Competent Authority / Sanctioning Authority for the following areas subject to the owners complying with the conditions of development above, as per the following norms:

(a) **For the Master Plan Road / Road Development Plan undertaken and developed**: equivalent to 200% of built up area of such area surrendered.

(b) **For conservation and development of lakes / water bodies / nalas foreshores & Recreational buffer development with greenery, etc:** equivalent to 100% of built up area of such recreational buffer area developed at his cost.

(c) **For Heritage buildings and heritage precincts maintained with adaptive reuse:** equivalent to 100% of built up area of such site area.

(d) **In larger projects of 4000 sq.mts** and above site area provisions made under Rule 167 (2) shall be applicable to the extent earmarked under roads above minimum percentage of required 30% of site area. However, this extent shall be restricted to the area affected in peripheral/access roads.

(3) The TDR may be arrived at on the basis of relative land value and equivalent amount in both export and Import areas, as per the Registration Department records. The Competent Authority shall have the discretion in the matter of applicability of TDR. The TDR shall not be allowed in unauthorized buildings / structures / constructions and shall be considered only after the land is vested with the Local Authority / Development Authority. The TDR certificate issued would be valid or utilized / disposed only within the concerned local body area and as per guidelines and conditions prescribed.

169. Guidelines on Transferable Development Rights:

In order to adopt uniform guidelines throughout the State the following conditions and guidelines are prescribed.

(1) As and when the owner of the building intends to construct the building in the remaining area of the site, he is entitled to construct the building as per the provisions of these Building Rules. In the event the owner doesn't take up any construction, the owner is entitled for TDR which can be used *I* disposed depending on convenience.

(2) A composite Transferable Development Rights (TDR) Register shall be maintained by the Sanctioning Authority as per the proforma given below on the award of TDR and its sale / disposal and utilization. A responsible officer shall be the custodian of the Register.

(3) At the time of sale / disposal / utilization of a particular TDR, the utilization details of the sale / disposal need to be entered at relevant columns in the register and that therefore the relevant file need to be referred to the custodian of the Register for making necessary entries in the register. The custodian is held responsible to enter relevant details in the register and also to enter utilization details in the TDR. When TDR Certificate is sold / utilized totally, the same shall be surrendered by the owners and the custodian shall take possession of the Certificate and make necessary entries in the register.

As per Government Orders, TDR award is to be arrived on the basis of relevant land value at both export and import areas as per prevailing Registration value.

(4) TDR can either be sold or can be utilized by the same owner depending on convenience.

(5) TDR can be allowed to be utilized for construction of one additional floor over the normal permissible floors without insisting additional setbacks subject to compliance of other norms.

(6) TDR shall not be applicable in larger projects i.e. in Group Development Schemes of more than 5 Acs. in extent.

(7) Every TDR sold or disposed shall be accompanied by a prescribed agreement on Rs.l00/ - non-judiciary stamp paper between the person disposing the TDR and the person who intend to utilize the TDR. Draft agreement is given below.

170. Documents to be submitted along with Application for Grant of Transferrable Development Rights Certificate:

Application to be made by owner in the prescribed format giving the following details:

(1) Name of the owner with clear address, contact phone number, etc.

(2) Copy of the ownership documents along with clear site plan and location plan.

(3) Site Plan showing the land surrendered, its extent, location with dimensions.

(4) Building permission Plan for the site by the urban local body.

(5) Details of Building permission granted / applied for like use or purpose of building, number of floors permitted, all-round setbacks, floor area permitted and utilized, parking area permitted; etc.

(6) Whether already benefit of relaxations been utilized for the site?

(7) Whether any Court case is pending against Urban Local Body?

(8) Land value of the site where TDR is to be availed (latest copy from concerned Sub Registrar to be enclosed)

(9) TDR admissible in terms of sq. m and equivalent land value.

PROFORMA FOR TRANSFERABLE DEVELOPMENT RIGHTS (TDR) REGISTER

Sl. No	Location of site surrendered and Name of the person against to whom TDR issued including date & TDR No.	Extent of TDR granted (in Sq. yds)	Name & Address of the person utilized and extent utilized	B.A.No. & utilization Details	Whether the property surrendered is vested with Municipal Corporation / Municipality/DA or not (details)	Export values as on the date of utilization	Import value as on the date of utilization	Rate & Balance to be utilized	Remarks *TDR surrender details
1	2	3	4	5	6	7	8	9	10

DISPOSAL OF TDR FOR UTILISATION

Agreement between Transferor & Transferee

(To be notarised on Rs.*100/-* NJS paper)

Whereas ………………….. (ULB) in consideration of the provision contained in A.P. Building Rules-2012 for award of Transferable Development Rights (TDR) Certificate for the sites required for public purpose / implementation of Master Plan, awarded TDR certificate for the site situated in Sy.No…………………..of ……….. (v)/ Block/ Ward in the name of……………………………………………vide TDR Certificate No. ………………………………......... issued on dated………….. for an extent of …………………………………. Sq. m., after vesting the said site / property in ……………(ULB);

Whereas there is provision in Transferable Development Rights (TDR) for disposal and utilisation anywhere in …………. (ULB) and as Sri………………………………….. S/o……………………………, (Transferor) Resident of ……………………………. has offered to utilise the TDR certificate for construction purpose at agreeable terms and conditions for the said TDR;

I …………………………………hereby dispose an extent of……………………… Sq.m., to Sri………………………………….. S/o…………………………….. (Transferee) duly retaining……………………………..Sq. m., with rights to utilise/ dispose at my convenience.

Both the parties hereby agree to the terms and conditions applicable to utilisation *I* disposal of TDR Certificate.

TRANSFEROR NAME ADDRESS	TRANSFEREE NAME ADDRESS
Cell No:	Cell No:
WITNESS: 1)	WITNESS: 1)
2)	2)

CHAPTER - XIII

PROVISIONS FOR ECONOMICALLY WEAKER SECTION (EWS) / LOW INCOME GROUP (LIG) HOUSING CATEGORY

171. In all Group Housing and Group Development Scheme Projects, whose land extent is more than 5 acres (2.023Hectares), the Developer/Builder shall provide 10% of the total built up area towards the EWS/LIG units (5% for EWS units and 5% for LIG units) or 25% of the total number of units of the housing projects towards EWS/LIG units (12.5% for EWS units and 12.5% of LIG units). The option is given to the builder/developer to provide either 10% of the total built up area or 25% of total number of units. Maximum plinth area of each EWS Unit is 25sq. m and Maximum plinth area of each LIG Unit is 50sq. m.

172. In lieu of providing EWS/LIG units, 10% of City Level Infrastructure Impact Fee under these Rules will be exempted for the main project and total exemption to the EWS/LIG units' area by the concerned Local Body/Development Authority. Other uses mentioned in the Zoning Regulations which are permissible in residential use zone will be permitted in the ground floor to the extent of equivalent area of EWS units only subject to fulfilling the parking, fire safety norms and also with separate entry and exit. The entire required fee pertaining to the use proposed shall be paid at the time of sanction of the building permission. These concessions shall apply only for those projects where EWS/LIG units are provided in-situ within the project site.

173. In case of Greater Visakhapatnam Municipal Corporation/ Vijayawada Municipal Corporation areas, 10% of the total built up area or 25% of the total number of units towards EWS/LIG units, shall be provided within the site or within the radius of 10km of the project site, or within 5km from the nearest aerial route boundary of the municipal limits subject to fulfillment of these Rules, with regard to minimum width of access road and other parameters.

174. In case of other Urban Local Bodies, 10% of the total built up area or 25% of the total number of units towards EWS/LIG units, shall be provided within the site or

within the radius of 5km of the project site, or within 5kms from the nearest aerial route boundary of the municipal limits subject to fulfillment of these Rules, with regard to minimum width of access road and other parameters.

175. The developer/builder is given option for procurement of EWS/LIG Units from the Housing projects being developed by Andhra Pradesh Housing Board with all civic amenities within 5km from the nearest boundary of the Municipal limits or within the radius of 10km from the project site in case of Greater Visakhapatnam Municipal Corporation and Vijayawada Municipal Corporation and 5km from the project site in case of other Urban Local Bodies and to dispose the same to eligible EWS/LIG Categories.

176. In case of Gram Panchayat areas falling in Development Authority areas and in sanctioned Master Plans, EWS/LIG units are to be provided in-situ only.

177. Two or more builders may be allowed to provide (with respect to proportionate area of the main projects) the specified number of EWS/LIG units as prescribed with all civic amenities but the occupancy for the main projects will be released only after completion of the EWS/LIG projects. Separate undertakings shall be obtained from the builders concerned by the Local Body.

178. In case of Group Housing/Group Development Schemes whose land extent is more than 3000sq. m and up to 5.00 Acres shelter fee shall be collected as follows:-

(1) The following shelter fee to be levied

TABLE – 40
SHELTER FEE

S. No.	Area	Rate per Sq. m (Rs)
(A)	(B)	(C)
1	GVMC; VMC; GMC	1500
2	Other Municipal Corporations	1200
3	Selection Grade & Special Grade Municipalities	1000
4	a) Other Municipalities b) Gram Panchayats falling in Development Authorities c) Gram Panchayats falling in areas notified under APTP Act, 1920	800

(2) The shelter fee shall be collected for 20% of total site area of the project.

(3) The shelter fee collected shall be utilized for development of EWS/LIG housing under any other Urban Housing Scheme meant for EWS categories or for undertaking civic amenities in slums and weaker section colonies only, for which a separate account shall be maintained by the local body/Development Authority. The shelter fee can also be utilized for redevelopment/improvement/rehabilitation of slums under Slum Development programme as local body share.

(4) In the sites above 5 acres it is optional to the developers to pay shelter fee as above in lieu of providing EWS and LIG houses.

179. The projects below 3000Sq.m are exempted from reservation of built up area/number of units for Economically Weaker Section/Low Income Group as well as payment of shelter fee.

180. With regard to identification of beneficiaries and procedure for disposal of EWS/LIG units by builder/developer/public or private Agencies, separate guidelines will be issued by the Government.

****

ANNEXURE – 1

COMPETENCE OF LICENSED TECHNICAL PERSONNEL

Every building/development work for which permission is sought under these rules shall be planned, designed and supervised by the registered professionals for carrying out various activities as given below. The qualifications, competence and procedure for licensing of the technical personnel to carryout different jobs for building permit and supervision for the purpose of licensing by the Authority shall be as given in the following paras:

1. **ARCHITECT:**
   The qualifications for licensing of Architect will be the Associate Membership of the Indian Institute of Architects or such Degree or Diploma which makes him eligible for such membership or such qualifications listed in Schedule XIV of Architects Act, 1972 and shall be registered under the Council of Architecture as per Architects Act, 1972.
   The licensed architect shall be competent to carryout work related to Building Permission, as given below and shall be entitled to submit.
   (a) All Plans and related information connected with building permission.
   (b) Structural details and calculations of building on plot up to 500sq.m and up to 3 Storeys or 13m Height.
   (c) Certificate of Supervision and completion for all buildings.

2. **ENGINEER:**
   The qualifications for licensing of Engineer will be the corporate membership (civil) of the Institution of Engineers or such Degree or Diploma in Civil or Structural Engineering which make him eligible for such memberships.
   The Licensed Engineer shall be competent to carry out the work related to building permission as given below shall be entitled to submit.
   (a) All plans and related information connected with building permit.
   (b) Structural details and calculations for building on plot up to 500sq.m and up to 5 storeys or 18m Height.
   (c) Certificate of Supervision and completion for all buildings.
   (d) Sanitary / water supply works for all type of buildings and
   (e) All Layout Plans.

3. **STRUCTURAL ENGINEER**:
   Structural Engineers shall be competent to submit the structural details and calculations for all building and supervision.
   In the case of complicate buildings and sophisticated structures, as decided by the Authority which are within the horizontal areas and vertical limits and shall be designed only by Structural Engineers.

4. **SUPERVISOR:**
   The qualifications for licensing of Supervisor will be:
   (a) Three years of Architectural Assistantship or Intermediate in Architecture with two years of experience. or
   (b) Diploma in Civil Engineering with two years of experience. or
   (c) Draftsman in Civil Engineering from I.T.I. with five year of experience under Architect / Engineer.

The Supervisor shall be competent to submit

(a) All plans and related information connected with building permit on plots up to 300sq. m and buildings up to stilt +10m height.
(b) Certificate of Supervision of Buildings on plots up 300sq. m and buildings up to stilt +10m height.

5. **TOWN PLANNER**:
The Licensed Town Planner shall be entitled to submit
(a) All Plans or related information connected with development permission of all areas; and
(b) Certificate of Supervision for development of land of all areas.

6. **DUTIES AND RESPONSIBILITIES OF LICENSED TECHNICAL PERSONNEL:**
(a) It will be incumbent on every Licensed Technical Personnel, in all matters in which he/she professionally consulted or engaged, to assist and co-operate with the Municipal Commissioner and other Municipal Officers in carrying out and enforcing the provisions of the Act and of any Bye-laws for the time being in force under the same.
(b) Every Licensed Technical Personnel shall in every case in which he/she may be professionally consulted or engaged, by responsible, so far as his/her professional connection with such case extends, for due compliance with the provisions of the Act and of any regulations for the time being in force under the said Act, or such of them as may being in force under the said Act, or such of them as may respectively be applicable to the circumstances of the particular case and in particular it will be obligatory on him/her to satisfy himself / herself that a qualified and competent Mistry or Inspector of Works in constantly employed and present on the work to supervise the execution of all works and to prevent the use of any defective material therein and the improper execution of any such work.
(c) In every case in which a Licensed Technical Personnel is professionally concerned in connection with any building or work upon any premises, in respect of which a right to require as set-back has accrued or is about to accrue to the Commissioner under the Provisions of the said Act, or any of them, it will be incumbent on such Licensed Technical Personnel to ascertain whether "the regular line of the Street" has been prescribed and whether any portion of the said premises is required for the street or under any presence whether, be a party to any evasion or evasion of the set-back (if any) that may be required.
(d) In every case in which a Licensed Technical Personnel professionally concerned in connection with any building or work upon any premises designed or intended to be used or any purpose in respect of which the written permission or license of the commissions, is prescribed by the said Act as a necessary condition to the establishment or use of such premises for such purpose, it shall be incumbent on such Licensed Technical Personnel, so far as his professional connection with such case extents, to see that all conditions prescribed by the said Act, or by any Bye-law of the time being in force there under, in respect of premises designed or intended to be applied to such use, are duly fulfilled or provided for.
(e) A Licensed Technical Personnel shall not carry out work in connection with any building or other erection on a plot of land leased or agreed to be leased by the ULB / DA in contravention of any term or condition of the lease or agreement for lease

(f) When a Licensed Technical Personnel ceases to be in the employment for the development work, he shall report the fact forthwith to the Authority.

ANNEXURE – 2

………………… Emblem & Name of the ULB

REGULATIONS FOR REGISTRATION OF LICENSED BUILDER/DEVELOPER/CONSTRUCTION FIRM

1. Short Title, extent and applicability:

(a) These regulations may be called "Regulations for Builder/Developer /Construction Firm License of………………… (ULB)"

(b) These regulations shall apply to the entire area of....................... (ULB)

(c) These regulations shall apply to the building activity in accordance with the provisions of A.P. Building Rules as amended from time to time.

2. Definitions:

For the purpose of these regulations, the following definitions shall have the meaning indicated against each:

(a) *'Act'* means, the relevant Act and as amended from time to time.

(b) *'Approved'* means, approved by the authority having jurisdiction.

(c) *'Authority'* having jurisdiction means, the Commissioner or an officer authorized by him to administer these regulations.

(d) *'Commercial complex'* means, the commercial building proposed for a plot area having more than 300Sq. m and above 10M height.

(e) *'Licensed Builder/Developer'* means, the Builder/Developer/Construction Firm who has been licensed by the Authority.

3. General Requirements for License:

(a) Person who applies for license as a Builder shall be a graduate in Architecture or Civil Engineering or in Construction Management or equivalent educational qualifications or 5 years of experience as Class – II Civil Contractor.

or

(b) A Company which applies for a License as a Developer/Construction Firm shall submit the application by an authorized qualified person on behalf of the Company and the company should employ a qualified person as prescribed in Rule 3 (a) and submit the particulars of the person appointed and such company shall be registered.

or

(c) The Builder/Developer who is in the profession of construction activity as on date of notification of revised building rules, is also eligible for license provided that he shall submit the proof of Income Tax Assessment for the past five years that he is engaged in the profession of Builder/Developer. A copy of PAN Card shall be submitted along with the application.

4. Licensing Authority and Procedure for obtaining License:

(a) The Commissioner or an officer authorized by him is the authority for issuing the license for practicing the profession of Builder/Developer/Construction Firm.

(b) The fee for License shall be as per the Schedule of Rates as approved by the ULB from time to time.

(c) The format of application for obtaining license as Builder/Developer/Construction Firm is as prescribed.

(d) The applicant shall apply in the prescribed form duly enclosing the required copies of certificates and duly paying the prescribed fee and submit the filled in 'Undertaking for obtaining the license of Builder/Developer/Construction Firm' as prescribed.
(e) Form of Certificate of License for Builder/Developer/Construction Firm is as prescribed.
(f) A register of licensed Builder/Developer/Construction Firm shall be maintained by the ULB and up to date list of such licensed Builder/Developer/Construction Firm showing the addresses and the period for which the licenses are valid shall be kept for inspection in the office of the ULB during the office hours.

5. Conditions for issuing License:

(a) The Authority has the right to cancel the license for contravention of any of the provisions of the Act, Rules or Bye-laws framed there under or for contravention of any of the conditions of the license or for failure in discharging the duties and responsibilities as prescribed in these regulations.

(b) In case the license is cancelled, he is not eligible for obtaining a fresh license and for practicing as a Builder/Developer/Construction Firm for a period of three (3) years from the date of cancellation.

(c) If for any reason the license is cancelled, the licensed Builder/Developer/Construction Firm shall return the license to the Authority within 24 hours of such cancellation.

(d) Every application for the renewal of license shall be submitted to the ………………(ULB) together with a renewal fee as prescribed from time to time and shall be accompanied by the license in respect of which the renewal is required.

6. Duties and Responsibilities of Builder/Developer/Construction Firm:

(a) It shall be incumbent on the licensed Builder/Developer/Construction Firm to cooperate with and assist the ULB in carrying out and enforcing strictly the provisions of Perspective Plan/Master Plan/Zonal Development Plan or any Statutory Plan, Building Rules, Zoning Regulations and Development Control Rules of ULB and other rules made under the provisions of relevant Acts from time to time.

(b) The licensed Builder/Developer/Construction Firm is entitled to execute all types of projects and submit the Building applications to ULB for obtaining building permissions.

(c) The licensed Builder/Developer/Construction Firm shall not associate himself with any construction not authorized or licensed by the ULB where such authorization or license is required under the provisions of the Act or Rules or any Bye-laws framed there under.

(d) The licensed Builder/Developer/Construction Firm shall not do anything prejudicial to public interest and the objectives for which he is licensed or be a party to any evasion or attempted evasion of the provisions of the relevant statute, and the Rules, Bye-laws and Regulations made there under ULB and for the time being in force.

(e) Copy of the certificate of License shall be submitted along with the Notice for Building Permit. The license number and the period of validity of the license shall be incorporated on the building plans.

(f) Every licensed Builder/Developer/Construction Firm shall in submitting the plans show correct details and dimensions, levels and give correct information in respect of such plans or building or work for which the proposed execution.

(g) It shall be incumbent on the licensed Builder/Developer/Construction Firm to countersign on Notarized Affidavit of the Owner of the property/GPA holder and submit along with the Notice for Building Permit for handing over the prescribed floor area of the proposed construction to the Sanctioning Authority as prescribed in the Rules from time to time.

(h) The sale or disposal of such built up area under the said Notarized Affidavit, lease and registration of such buildings shall be allowed by the Registration Authority only after an Occupancy Certificate is obtained from the ULB.

(i) In case of any violation of building constructions, it shall be removed by the Owner/Builder/Developer/Construction Firm within the stipulated time on receipt of the statutory Notice of ULB.

(j) Upon failure to comply with the direction of the ULB to remove violations, violated portion of the building will be removed summarily and the handed over portion of the building will be disposed of in public auction by ULB and further action on licensed Builder/Developer/Construction Firm shall be initiated, which includes cancellation of license and debarring from the profession for a period of three (3) years.

(k) It is a prerequisite that every Builder/Developer/Construction Firm is required to submit copy of the agreement executed with Consulting Architect / Structural Engineer for execution of the project along with the building application wherein a condition of the agreement shall be incorporated that the consultants will offer their services to builder till completion of work and obtaining of Occupancy Certificate. In no case the construction should take place without the supervision of the Licensed Technical Personnel.

7. <u>Requirements to be submitted for obtaining the License of Builders / Developers / Construction Firm</u>

(a) <u>In case of Builder</u>

(i) Certificate of Qualification of Degree equivalent to B.E (Civil) / B.Tech. (Civil) / B. (Arch) (duly attested by Gazetted Officer)

(ii) Copy of PAN Card (duly attested by Gazetted Officer)

(iii) Photographs (3 Nos) of the Authorized Person

(iv) Experience Certificate (Optional)

(b) <u>In case of Real Estate Developer / Firm</u>

(i) Certificate of Qualification of Degree of the authorized person of the Firm or Employee of the Firm (as per Rule 3(a)) (duly attested by Gazetted Officer)

(ii) Authorization Letter on behalf of the Company certifying the Person / Employee of the firm.

(iii) An Affidavit on Rs.100/- Non-judicial Stamp Paper signed by the Employee (Engineer) of the firm in the prescribed form.

(iv) Incorporation Certificate of the Company / Firm Registration Copy (duly attested by Gazetted Officer).

(v) Copy of Company PAN Card and Income Tax Returns filed by the Company (for the past five years duly attested by Gazetted Officer)

(vi) Partnership Deed of the Firm / Memorandum & Articles of Association of the Company (duly attested by Gazetted Officer)

(vii) NOC from remaining Partners of the Firm / Directors of the Company for the person represented.

(viii) Photographs (3 Nos) of the Authorized Person.

(ix) Experience / Previous Projects Done (Optional)

(x) Fee as prescribed by the ....(ULB) through D.D in favour of Commissioner, ...(ULB))

COMMISSIONER
....................(ULB)

ANNEXURE – 3

UNDERTAKING FOR OBTAINING BUILDING PERMISSION

[To be Signed and Submitted by the Owner, Builder/Developer/Construction Firm and Licensed Technical Personnel]

(Notarized undertaking to be executed on Rs.100/- N.J. Stamp Paper)

1. This undertaking is executed on this……………………..day of ………………… 20.. at ……………………………………………,(ULB) jointly by the Owner, Builder/Developer/Construction Firm and the Licensed Technical Personnel. **Here in after called the parties of the 1st Party, which terms shall include their legal heirs, successors, agents, assignees etc.**

A	NAME & ADDRESS OF THE OWNER											
1	Name											
2	Age											
3	S/D/W/o											
4	Door/Plot/Flat No.											
5	Road/Street											
6	Locality											
7	Village/ Town /City					**PIN**						
8	Mandal											
9	District											
10	e-mail											
11	Phone / Mobile No	.										

B	DETAILS OF THE LICENSED PERSONNEL

Sl. No.	Name	Address	License No.	Signature
1	………………………………Builder / Developer/ Construction Firm			
2	…………………………… Architect			
3	…………………………….. Engineer			
4	……………………………… Surveyor			
5	…………………………… Structural Engineer			
6	…………………………… Town Planner			

C	LOCATION OF THE PROPOSED SITE									
1.	Plot Nos.									
2.	Total Area	sq. m:	sq. yds:	Hcs:	Acs:					
3.	Sanctioned Layout No. / LRS No.									
4.	Survey No.									
5.	Premises / Door No.									
6.	Road/ Street									
7.	Ward No./ Block No.									
8.	Locality									
9.	Village/ Town /City		**PIN**							
10.	Mandal									
11.	District									
12.	Circle/ Division									
13.	Zone									

D	DETAILS OF THE PROPOSED CONSTRUCTION				
1	Site Area (in Sq. m or Hcs)	(a) As per Documents	(b) As per submitted Plan	(c) Road Widening Area	(d) Net Area

2	No. of Floors	Cellar	Stilt	Ground	Upper Floors	Total
3	Floor Area (in Sq.m)					
4	Parking floor area (in Sq.m)					
5	Use of the Building	Individual Residential/ Group Housing/ Commercial/ Institutional/ Row Housing / Others (specify) _				

2. 2nd Party:

In favour of the Commissioner, ………………………………….(ULB) here in after called the 2nd party, which term shall include their representatives, agents, officers and staff.

3. Declaration–cum–undertaking and Indemnity Bond by the Owner, Builder/ Developer/Construction Firm and Licensed Technical Personnel:

Owner:

(a) That I am/we are **[owners]** entrusting the Construction of the building to the Builder/Developer/Construction Firm, the details of which are as above and they shall take up the construction of the said building construction according to the sanctioned plan and under the strict supervision of the Architect, Structural Engineer, and Site Engineer [Licensed Technical Personnel] engaged for the purpose.

(b) I am aware that in the event of building being constructed in violation of the sanctioned building plan, the Authority shall have the right to take action against me as per the provisions of these regulations and Act as it may deem fit including revocation of sanction of building plans and demolition of the violated portions.

(c) Undertake that no loss or damage will be caused to the adjoining built up properties or to any person as consequence of the construction at the time of digging of its foundations or during the course of its construction or at any time thereafter. The owner agrees and undertakes that in the event of any claim being made by any person or persons against the concerned Authority either in respect of the manner of construction or the consequences or towards the payment of any compensation for the damages flowing form the said sanction he shall be responsible and liable and not the concerned Authority.

[Builder/Developer/Construction Firm]

(d) I / We **[Builder/Developer/Construction Firm]** being individual / firm / company / Society have been entrusted to construct the building as referred above by virtue of a Registered Development Agreement (copy of which is enclosed herewith).

(e) I/We, [**Engineer**] submit that I am/we are aware about the provisions contained in the Regulations under rules in force for Builder/Real Estate Developer/Firm License of the Sanctioning Authority. I submit that, I/we possess the required qualification of Engineer as prescribed in Rule 3.1 of

the Regulations for Builder / Real Estate Developer / Firm License and I am with my free consent working in the company referred above. I further undertake all the responsibility as a Civil Engineer of the Firm and will be responsible for the project done by my Firm. If any misrepresentation / violation on my supervision, I will be held personally responsible for any consequences aroused now and in future and the competent authority is at liberty to initiate any action upon me including cancellation of Builders License or any other action enforced by the Sanctioning Authority.

Licensed Technical Personnel & Owner:

(f) The building plan has been prepared strictly as per the approved building Byelaws and relevant IS Codes / provisions of NBC. The construction shall be carried out in accordance with the building plan and the LTP shall be completely accountable for any lapse on my part up to within 6 months after obtaining Occupancy Certificate of the building.

(g) The construction shall be carried out strictly in accordance with the sanctioned building plans and in case any deviation is carried out, the same shall be informed to the concerned Authority within 48 hours.

(h) That we are fully aware of the provisions of the prevailing Building Rules and undertake to abide by the same.

(i) That mandatory setbacks have been proposed and shall be maintained in accordance with the setbacks marked in the layout plan/Master Plan.

(j) Those in case the owner dispenses with the services at any stage what so ever, the same shall be informed to the concerned Authority within 48 hours.

(k) That nothing has been concealed and no misrepresentation has been made while preparing and submitting the building plans.

(l) That in case anything contrary to the above is found or established at any stage, the concerned Authority shall be at liberty to take any action as it may deem fit including revocation of sanction of building plans and debarring me for submission of building plans with the Authority under the scheme and also lodge a complaint with the Professional Body of the concerned LTP for appropriate action.

(m) The plot has been demarcated at site and the size, shape and area of plot available at site tallies with the ownership documents.

(n) We hereby undertake that we are solely responsible for execution of the building construction work according to the sanctioned plan under the strict supervision of the Architect, Structural Engineer and Site Engineer engaged by me/ourselves for the purpose, without which it shall be treated as construction without permission.

(o) The Site Engineer employed shall maintain a register in which, the Site Engineer, Architect and Structural Engineer shall record their comments at regular intervals i.e. at foundation level, and at each roof, slab level, and submit the periodical report to the Commissioner.

(p) That in case Site Engineer / Structural Engineer / Architect is changed during the course of construction or the Architect / Structural Engineer / Site Engineer disassociates themselves with ongoing project, the fact shall immediately be reported to the Commissioner i.e. within seven days by registered post / in person along with consent of newly engaged site Engineer / Architect / Structural Engineer.

(q) That all the parties of the 1st part viz. Owner, Builder, Architect, Structural Engineer and Site Engineer shall jointly and severely be held responsible for the structural stability during the building construction.

(r) We will not deliver the possession of any part of the built up area of building constructed by us to any purchaser or tenant unless & until the Occupancy Certificate is obtained by us from the Commissioner duly submitting the following:

(i) Building Completion Notice issued by the Architect duly certifying that the building is completed as per the sanctioned plan.

(ii) Structural Stability Certificate issued by the Structural Engineer duly certifying that the building is structurally safe and the construction is in accordance with the specified designs

(iii) An extract of the site registers containing inspection reports of Site Engineer, Structural Engineer and Architect.

(iv) Insurance Policy for the completed building for a minimum period of three years.

(s) General Undertaking:

(i) Parking Space: The parking space is provided in the Building Cellar/Stilt floor for parking of vehicles and it should not be converted (or) misused for any other purpose other than parking of vehicles and it should be free from all cross walls / partition walls, and rolling shutters should not be erected at any time in future and the Commissioner is at liberty to demolish (or) remove the same without any notice in case, if the 1st party violates the undertaking executed.

(ii) Balcony Projections: The balconies shall not be enclosed by converting them as toilets/bathrooms or including into rooms by reducing the mandatory open spaces and if any such constructions are made, the same would be removed by 2nd party without giving any notices.

(iii) Payment of Special Collection Charges for Garbage:

That the 1st party should pay special collection charges for garbage disposal as prescribed for garbage refuse collection.

(iv) Payment of Special Sanitation Fee: That the 1st party should pay special sanitation fee for the routine clearing and desilting of storm water drain.

(v) Stacking of Building Material & Dumping of Debris: That the 1st party should not stock the building material and dump any debris on the road margin/footpath or Government land.

(vi) No. of Units: The number of units permitted should not be increased and the building should not be converted into group housing and sold at any time in future.

(vii) Percolation Pits & Terrace Water Collection: The rain water harvesting system as prescribed in the Building Rules shall be implemented in true spirit.

(viii) T

o use quality material/workmanship and supervision as per NBC): We the **Licensed Technical Personnel** hereby certify that the

erection, re-erection of material, alteration, demolition in/of building premises shall be carried out under the supervision and further certify that all designs, constructions and the materials (type and grade and workmanship) of the work shall be generally in accordance with the general and detailed specifications submitted along with and as per standards specified by the National Building Code of India and Bureau of Indian Standards and that the work shall be carried out according to the sanctioned plan.

(ix) We, the undersigned **Structural Engineers** are held responsible for structural and other safety of the building during construction and after completion. The structural design including Geo-Technical aspects shall be in accordance with the National Building Code of India. All materials and workmanship shall be a good quality confirming to the Bureau of Indian Standards Specifications and codes. Accordingly, the Sanctioning Authority can proceed for the legal action if any such structural failures occur during or after the construction.

4. We the above named deponent do hereby solemnly affirm and certify that we have voluntarily executed this under taking with free will and signed this ……………………… day of …………………… 20… in presence of the following witness.

Witnesses:	**Parties of 1st part**	
1)Name:	**(A) Name of the Site Engineer**	
Address:	Address with Regn.	
	Signature	
	(B) Name of the Architect	
	Address with Regn.	
	Signature	
Signature	**(C) Name of the Structural Engineer**	
2)Name:	Address with Regn.	
	Signature	
Address:	**(D) Name of the Builder/Developer/ Construction Firm**	
	Address with Regn.	
	Signature	
	(E) Name of the Owner	

	Address	
Signature	Signature	
Witnesses with Name Address & Signature	**1.**	**2.**
Sworn & signed before me. **Notary**		

ANNEXURE - 4

Notarised under taking to be executed
On Rs.100/- N.J. Stamp Paper

ROAD WIDENING UNDERTAKING

This undertaking is executed on this the ………….................. day of ……….……………………. by……………….………………………………. W/o.………………………………………R/o……………………………. Situated at ……………………………………………………………….. herein after called the 1st party which term shall include their legal heirs, successors, assigns and tenants in favour of the Commissioner, ……………………….(ULB), herein after called the 2nd party which term shall include his representatives, agents, officials, staff of ……………………….(ULB).

WHEREAS, the 1st party has applied to the 2nd party for permission to construct residential / commercial………………………………… consisting of ……………..……… ……………….floors at Plot / H.No.………………………………………………… situated …………………. ……………………………. WHEREAS, the 2nd party arty has put in a condition that:

The land and the existing structures are/is getting effected in road widening throughout the frontage of the plot admeasuring………….Sq.m should be surrendered to the ……………………….(ULB) for road widening before releasing the approved plan free of cost without claiming any compensation towards the land and the structures existing on the road widening site.

The first party in token of accepting the above conditions hereby undertake that they are herewith handing over the physical possession of the strip of land to the Commissioner, ……………………….(ULB) on this day of …………………… at free of cost before commencing the construction without claiming any compensation towards land and structures. The above undertaking is executed by me with free will and due consciousness for having obtained permission for the construction of residential / commercial building in the Plot / H.No. …………………………………………… situated at ……………………

Witness:

1)

Parties of 1st part

1)

2)

Sworn & signed before me.

Notary

ANNEXURE – 5

WATER SUPPLY AND SANITATION REQUIREMENTS IN BUILDINGS

1. Plumbing and Sanitary Services

(1) The planning, design, construction and installation of water supply, drainage and sanitation and gas supply system shall be in accordance with Part-9: Plumbing Services, Section-l Water supply, Drainage and sanitation (including Solid Waste Management) and Section-2 Gas supply of NBC, 2005.

(2) Requirement of Water Supply for various occupancies in buildings shall be as given in Tables A.1, A.2 and A.3.

(3) Requirement of Sanitary fittings and installations for different occupancies in buildings shall be as given in Tables A.4 to A.17 for calculation of occupancy.

(4) Sewage treatment plant of capacity of treating 100% waste water to be installed. (Ref Table - 37)

2. Segregated sanitation for Visitors in Public Buildings

(1) Special requirement of segregated sanitation for Visitors in Public Buildings (Government Buildings, Hospitals, Educational Institutions, Commercial Building etc). Provisions and occupancies shall be referred at Table A.10.
** This section is provided for *Segregated toilet facilities for visitors in Public Buildings (within the premises of the building, but outside the building block)*.

(2) Public toilets are meant for floating population, usually located near railway stations, bus stands, market places, government hospitals, religious centers etc. These toilets have a greater demand for urinals than community toilets.

(3) The key considerations for siting such facilities on the site are
 (i) Size of the toilet block (i.e. number of seats) and
 (ii) Location of the toilet block with respect to the main building block.
 (iii) Convenience of the visitors in accessing and using the facility.

(4) Surveys conducted by the central government show that people, especially women and aged, are unlikely to use the facility if it beyond 500 meters. The preferable location shall be within 200-500m from the main entry of the building.

(5) The site shall be earmarked on Site Plan or a Layout plan. The Authority shall clearly state advantages and disadvantages of the location for the owner/ engaged Competent Professional for building plan design (as per Annexure - 1) to make an informed decision on the siting.

(6) It must be accessible to visitors and general public during the operational hours of the building. However, fiscal generation for maintenance may be planned w.r.t user charges from visitors and general public.

(Experience in sample cities has shown that toilet blocks are more likely to remain clean if they are centrally located; those on periphery sooner fall into disrepair.)

3. Other factors to be considered:

(1) Wastewater conveyance/treatment and prevention of contamination-

Since sewers may not be available in many cities, in most cases the toilet blocks will have on-site sanitation, which would require periodic cleaning of tanks / pits. Location on site should allow easy and hygienic emptying of the pits / tanks and ensure that ground water table is not contaminated by wastewater percolation.

(2) Adequacy in provision-

The size of the block (i.e. on number of seats) must meet visitors' need. Inadequacy results in long queues and encourages open urination. Care is to be taken for *balancing problems and other special needs* of children and the elderly.

(3) *Design considerations*

(i) Adequate Ventilation.
(ii) Door Design / Direction of swing of the door (preferred outwards),
(iii) Adequate Waiting area and
(iv) Adequate volumes of water storage.

(4) The facilities should include:

(i) Separate toilet blocks for men and women with separate entries.
(ii) Seats for children to be provided in both sections for men and women.
(iii) Waiting / Holding area.
(iv) Space for Facility caretaker and maintenance staff – from where they can monitor and maintain both facilities for men and women.
(v) Urinal facilities for men
(vi) Waste water disposal system
(vii) Janitor / Store room for cleaning material / equipment.

Note: Table A.12 may be referred for number of seats / urinals for this section.

4. Norms for differently-abled within segregated toilets:

(1) One special W.C. in a set of toilet shall be provided for the use of differently abled persons, with essential provision of wash basin near the entrance.
(2) Minimum clear opening of the door shall be 900 mm. and the door shall swing out.
(3) Suitable arrangement of vertical/horizontal handrails with 50 mm. clearance from wall shall be made in the toilet.
(4) The W.C. seat shall be 500 mm. from the floor.

5. Water requirement and facilities:

(1) Water requirement for the facility may be worked out and enough storage for ½ day operation is to be kept in storage.
(2) If municipal water supply is reliable, the toilet blocks may have underground sump that can store half a day's requirement and overhead tanks for another half.
(3) If municipal water supply is not available, toilet block may have its own bore well and pump with no underground sump.

(4) Alternatively a hand tube well can be used for storing water in an elevated (not overhead) tank.
(5) To minimize the wastage of water, self-closing water taps should be used. The pans must be of Pour Flush (PF) design i.e. with a steep slope. Traps should be of a 20 mm water seal. (Use of 50 mm water seal traps will require more water for flushing.)
(6) If toilet is to be linked to city sewer, a master trap has to be provided at the sewer connection.
(7) Urinals may not be fitted with urinal pots as their replacement is expensive.

6. Construction Site

(1) At construction job sites, one toilet must be provided per 20 employees. In a work zone with between 21 and 199 employees, a toilet seat and one urinal must be provided for every 40 employees. For 200 or more workers, regulations call for a toilets eat and a urinal per 50 workers. The toilet must be located within 200 m or 5 minute walk.
(2) Job sites that are not equipped with a sanitary sewer must, unless prohibited by local codes, provide privies, in locations where their use will not contaminate either ground or surface water. Other alternatives to a privy could be chemical toilets, re-circulating toilets, or combustion toilets.
(3) Toilets should be cleaned regularly and maintained in good order, running water, must be provided along with soap and individual hand towels.

7. Temporary Camp Toilets

Toilet facilities shall be provided within 60 m of the, site, which shall not be closer than 15 m of dining area or kitchen. Make sure that toilet area is cleaned at least once per day, it is sanitary, adequately lighted and is employee safe.

8. Special / Contingency Toilets [Table A.19]

(1) For ***Special events*** like open air theater, religious/political gatherings, mela, etc. for which there are no permanent toilet facilities, contingency toilets/PSUs shall be provided. The following considerations shall determine the number of toilets to be provided for particular event:
(a) Duration of the event
(b) Type of crowd
(c) Weather conditions
(d) Whether finishing times are staggered if the event has multi-functions and the following guidelines shall be applied with minimum 50 percent female toilets.
(2) ***Special Purpose Toilets***: *Special toilet facilities* shall be adequately provided in public projects (transport terminals/ healthcare and other public spaces) in million plus cities for the *Third gender* with appropriate cleanliness arrangements.

9. General guidance for water supply arrangements

(1) *For new construction:* Provision shall be made for underground tank for the storage of water, having capacity at 200 *l*. per person with adequate pumping arrangements to supply water to upper floors. Filtered water

connection will be allowed only for use of drinking and bathing needs. For other purposes i.e. flushing and gardening etc., the individual shall be required to have own arrangements of tube well water within the premises. While according sanction to Layout Plan, the Authority shall make a special mention that provision for space shall be kept for the construction of underground reservoir of adequate capacity along with booster pumping station.

(2) Arrangements as given above shall also be provided in Group Housing Societies.

(3) The plumbing arrangement in case of new constructions shall be made in a way that the potable water shall be used for drinking, cooking & bathing only and for rest of the uses, provision for ground water can be made with dual piping system.

(4) Low capacity cistern should preferably be provided instead of normal 12.5 L capacity.

(5) Provisions for sustainable methods of Water and Wastewater Management and Water harvesting may be referred from the Chapter of Rain Water Harvesting in these Rules.

TABLE-A.1 Per Capital Water requirement for various Occupancies/Uses

Sl.No	Type of Occupancy	Consumption per head per day (in lt.)
1.	Residential	
	a) In living units	135
	b) Hostels	135
	c) Hotels with lodging accommodation(per bed)	180
	d) Hotels(5 Star and above)	340
2.	Educational	
	a) Day Schools	45
	b) Boarding Schools	135
3.	Institutional (Medical Hospitals)	
	a) No. of beds not exceeding 100	340
	b) No. of beds exceeding 100	450
	c) Medical quarters and hostels	

		135
4.	Assembly- Cinema theatres, auditoria, etc. (per seat accommodation)	15
5.	Government or Semi public business	45
6.	Segregated toilets facilities for Visitors in public Buildings a) Each use of toilet (including g washing hands and floors) b) Flushing urinals	 7 0.20
7.	Mercantile(Commercial) a) Restaurants (per seat) b) Other business building	 70 45
8.	Industrial a) Factories where bath-rooms are to be provided b) Factories where bath-rooms are not be provided	 45 30
9.	Storage (including Warehouses)	30
10.	Hazardous	30
11.	Intermediate Stations (excluding mail and express stops)	45 (25)*
12.	Junction Station	70 (45)*
13.	Terminal Stations	45
14.	International and Domestic Airports	70

* The values in parenthesis are for such stations, where bathing facilities are not provided.

Note: The number of persons for Sl.No.11 to 14 shall be determined by the average number of passenger handled by the station daily with due consideration given to the staff and workers likely to use the facilities.

TABLE-A.2 Flushing Storage Capacities

Sl.No.	Classification of Building	Storage Capacity
1	For tenements having common	900 lt. net per W.C. seat

	convenience	
2	For residential premises other than tenement having common conveniences	270 lt. net for one W.C. seat each and 180 lt. for each additional seat in the same flat.
3	For factories and workshops	900 lt. per W.C. seat and 180 lt. per urinal.
4	For cinemas, public assembly hall, etc.	900 lt. per W.C. seat and 350 lt. per urinal.

TABLE-A.3 Domestic Storage Capacities

Sl.No.	No. of Floors	Storage Capacity	Remarks
For premise occupied tenements with common conveniences			
1	Ground floor	Nil	Provided down take fittings are installed.
2	Floors 2, 3, 4, 5 and upper floors	500 litre per tenement	
For premises occupied as flats or blocks			
1	Ground floor	Nil	Provided down take fittings are installed.
2	Floors 2, 3, 4, 5 and upper floors	500 litre per tenement	

Note:- 1. If the premises are situated at a place higher than the road level in from of the premises storage at ground level shall be provided on the same lines as on floors.

2.The above storage may be permitted to be installed provided that the total domestic storage calculated on the above basis is not less than the storage calculated on the number of down take fittings according to scale given below:

Down take taps	70 lt. each
Showers	135 lt. each
Bathtubs	200 lt. each

TABLE-A.4 Sanitation requirements for Shops and Commercial Offices

Sl.No.	Sanitary Unit /	For Personnel

	Fittings	
1	Water closet	One for every 25 persons or part thereof exceeding 15 (including employees and customers). For female personnel 1 for every 15 persons or part thereof exceeding 10.
2	Drinking Water Fountain	One for every 100 per with a minimum of one on each floor.
3	Wash Basin	One for every 25 persons or part thereof.
4	Urinals	Same as Sl.No.3 of Table 4.14
5	Cleaners' Sink	One per floor minimum, preferably in or adjacent to sanitary rooms.

Note:-Number of customers for the purpose of the above calculation shall be the average number of persons in the premises for a time interval of one hour during the peak period. For male-female calculation a ratio of 1:1 may be assumed.

TABLE-A.5 Sanitary Requirements for Hotels

Sl.No	Sanitary Unit	For Residential Public Staff	For non Residential Staff	
			For Male	For Female
1	Water Closet(WC)	One per 8 Persons omitting occupants of the attached water closet minimum of 2 if both sexed are lodged	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	2 for 1-13 persons 4 for 13-25 persons 6 for 26-40 persons 8 for 41-57 persons 10 for 58-77 persons 12 for 78-100 persons Add 1 for every 6 persons or part thereof.
2.	Ablution Taps	One in each W C	One in each W C	One in each W C
3.	Urinals	Nil	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 40-70 persons	Nil

			4 for 71-10 persons	
4.	Wash Basins	One per 10 persons omitting each basin installed in the room/suite	1 for 15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 71-100 persons	1 for 1-12 2 for 13-25 3 for 26-40 4 for 41-57
5.	Baths	One per 10 persons less occupants of room with bath in suite	Nil	Nil
6	Cleaner's Sink	One per 30 Bed rooms (One per floor minimum)	Nil	Nil
7.	Kitchen Sink	One in each Kitchen	One in each Kitchen	One in each Kitchen

Table-A.5 Contd: For Public Rooms

Sl.No.	Sanitary Unit	For Male	For Female
1.	Water Closet	One per 100 persons upto 400 persons; for over 400 add at the rate of one per 250 persons or part thereof.	Two for 100 persons upto 100 persons over; 200 add at the rate of one per 100 persons or part thereof.
2.	Ablution Taps	One in each W.C	One in each W.C
3.	Urinals	One for 50 persons or part thereof.	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons
4.	Washbasins	One per WC/Urinal	One per WC
5.	Kitchen Sink	One in each Kitchen	One in each Kitchen
6.	Bath (Showers)	One per 10 persons	

7.	Cleaner's Sink	One per 30 Bed rooms(One per floor minimum)

Note:- i) It may be assumed that the two-third of the number are males and one-third females.
ii) One water tap with drainage arrangement shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinals.

Table-A.6 Sanitation Requirements for Educational Occupancy

Sl.No.	Sanitary Unit	Boarding Institution		Other Educational Institution	
		For Boys	For Girls	For Boys	For girls
1.	Water Closet(W.C)	One for 8 boys or part thereof	One for 6 girls or part thereof	One for 40 boys or part thereof.	One for 25 girls or part thereof
2.	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3.	Urinals	One per every 25 pupils or part thereof	--	One per every 20 pupils or part thereof	--
4.	Wash Basins	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	One for every 60 pupils or part thereof	One for every 40 pupils or part thereof
5.	Baths	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	--	--
6.	Drinking Water Fountains	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof
7.	Cleaner's Sink	One per Floor minimum	One per Floor per minimum	One per Floor minimum	One per Floor minimum

Table-A.6 Contd: Nursery Schools

Sl.No.	Sanitary Units	Requirement
1.	Water Closet	One for 15 boys, one for 6 girls

2.	Ablution Taps	One in each W.C.
3.	Urinals	One for 12 boys
4.	Wash Basins	One for every 15 pupils or part thereof
5.	Baths	One bath per 40 pupils
6.	Drinking Water Fountains	One for every 50 pupils or part thereof
7.	Cleaner's Sink	One per Floor minimum.

Note:-

1. One water tap with draining arrangements shall be provided for every 50 persons or part thereof, in the vicinity of water closet and urinal.
2. For teaching staff, the schedule of sanitary units to be provided shall be the same as in case of office buildings (Table 5.10).

TABLE-A.7 Sanitation Requirements for Institutional (Medical) Occupancy – Hospital

Sl.No.	Sanitary Unit	Hospitals with indoor patient Ward for Males & Females	Hospitals with outdoor Patient Wards	
			For Males	For Females
1	Toilet Suite (1WC+1 Washbasin+1shower)	Private room upto 4 persons	For upto 4 patients	
2	Water Closet (W.C.)	One for every 8 beds or part thereof	One for every 100 persons or part thereof	One for every 25 persons or part thereof
3	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.
4	Wash Basins	Two upto 30 bed; add one for every additional 30 beds, or part thereof	One for every 100 persons or part thereof	One for every 25 persons or part thereof
5	Baths with Shower	One bath with shower for every 8 beds or part thereof	--	--
6	Bed pan washing	One for each ward	--	--

	sink			
7	Cleaner Sinks	One for each ward	One per floor minimum	One per floor minimum
8	Kitchen sinks & dish washers (where kitchen is provided)	One for each ward	--	--
9	Urinals	One for 30 beds (male wards)	One for every 50 persons or part thereof	--
10	Drinking water fountain	One for each ward	One for every 500 persons or part thereof	

TABLE-A.7 Contd. Administrative Buildings

Sl.No.	Sanitary Unit	For Males	For Females
1	Toilet Suite (1WC+1 Washbasin+1shower)	For individual doctor's / officer's room	
2	Water Closet (W.C.)	One for every 25 persons or part thereof	Two for every 25 persons or part thereof
3	Ablution Taps	One in each W.C.	One in each W.C.
4	Wash Basins	One for every 25 persons or part thereof	One for every 25 persons or part thereof
5	Baths with Shower	One in each floor	One in each floor
6	Cleaner Sinks	One per floor minimum	One per floor minimum
7	Kitchen sinks & dish washers (where kitchen is provided)	One for each floor	One for each floor
8	Urinals	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 persons add at the rate of 3%; for	--

		over 200 persons add at the rate of 2.5%	
9	Drinking water fountain	One for every 100 persons or part thereof	

TABLE-A.8 Sanitation Requirements for Institutional (Medical) Occupancy – (staff quarters and Hostels)

Sl.No.	Sanitary Unit	Doctor's Dormitories		Nurses Hostel
		For Male Staff	For Female staff	
1	Water Closet (W.C.)	One for 4 persons	One for 4 persons	One for 2 persons or part thereof Two for 13-25
2	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.
3	Wash Basins	One for every 8 persons or part thereof	One for every 8 persons or part thereof	One for every 8 persons or part thereof
4	Bath (with Shower)	One for every 4 persons or part thereof	One for every 4 persons or part thereof	One for every 4 persons or part thereof
5	Cleaner Sinks	One per floor minimum	One per floor minimum	One per floor minimum
6	Drinking water fountain	One for 100 persons or part thereof		One for 100 persons or part thereof

TABLE-A.9 Sanitation Requirements for Governmental and Public Business Occupancy and Offices

Sl.No.	Sanitary Unit	For Male Personnel	For Female Personnel
1	Water Closet (W.C.)	One for every 25 persons or part thereof	Two for every 15 persons or part thereof
2	Ablution Taps	One in each W.C.	One in each W.C.
3	Urinals	Nil upto 6 persons	--

		1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 add @ 3%; For over 200 persons add @ 2.5%	
4	Wash Basins	One for every 25 persons or part thereof	One for every 25 persons or part thereof
5	Drinking water fountains	One for every 100 persons with a minimum of one on each floor	One for every 100 persons with a minimum of one on each floor
6	Cleaner Sinks	One per floor minimum; preferably in or adjacent to sanitary rooms	--
7	Executive Room / Conference Halls	Toilet Suite (1WC, 1Washbasin, optional shower for 24 hr usages) Unit could be common for Male / Female or separate depending on the number of user of each facility.	

Note: One Water tap with drainage arrangements shall be provided / 50 persons or part thereof in the vicinity.

TABLE-A.10 Segregated sanitation facilities for Visitors in the Public Buildings

Sl.No.	Sanitary Unit	For Male Personnel	For Female Personnel
1	Public toilet near Railway Stations (24X7) a) Water Closet (W.C.) b) Urinals c) Ablution taps	a) One for 100 users b) One unit per 300-500 users c) One in each W.C.	a) One for 100 users b) One unit per 300-500 users c) One in each W.C.
2	Public toilet near market place / offices (for working hours) a) Water Closet (W.C.) b) Urinals c) Ablution taps	a) One for 100 users b) One unit per 200-300 users c) One in each W.C.	a) One for 50 users b) -- c) One in each W.C.
3	Public toilets near Public Buildings a) Water Closet (W.C.) b) Urinals c) Ablution taps	a) One for 100 users b) One unit per 300-500 users c) One in each W.C.	a) One for 100 users b) One unit per 300-500 users c) One in each W.C.

Per Capita Volume of Water required may be referred at item 6, Table 4.6
Area and sizes of seats / units may be referred at Table 4.16

TABLE-A.11 The recommended enclosure-sizes for different facilities at visitor's toilets

Sl.No.	Description	Optimum (mm)	Minimum (mm)*
1	Water Closet enclosures	900X1200	750X800
2	Urinals (divided by partition walls)	575X675	500X600

* In case of space constraint, the minimum sizes may be adopted

TABLE-A.12 The recommended areas for different facilities at visitor's toilets

Sl.No.	Sanitary Unit	Dwelling with individual conveniences	Dwelling without individual conveniences
1	Bath Room	One provided with water tap	One for every two tenement
2	Water Closet (W.C.)	One	One for every two tenement
3	Sink (or Nahani) in the Floor	One	--
4	Water Tap	One	One with drainage arrangement in each tenement One in common bath rooms and common water closet

Note: where only one water closet is provided in a dwelling the bath and water closet shall be separately accommodated.

TABLE-A.13 Sanitation Requirements for Assembly Occupancy Buildings (Cinema, Theaters, Auditoria. etc.)

Sl.No.	Sanitary Unit	For Public		For Staff	
		Male	Female	Male	Female
1	Water Closet	One for 100 persons upto 400 persons. For over 400 persons, add at the rate of 1 per 250 persons or	Four for 100 persons upto 200 persons. For over 200 persons, add at the rate of 1 per 50 persons or	One for 15persons Two for 16-35 persons	Two for 1-12 persons Four for 13-25 persons Add at the rate of 1 per 6

		part thereof	part thereof		persons or part thereof
2	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3	Urinals	One for 50 persons or part thereof	--	Nil upto 6 persons One for 7-20 persons Two for 21-45 persons	--
4	Wash Basins	One for every 200 persons or part thereof	One for every 200 persons or part thereof	One for 1-15 persons Two for 16-35	One for 1-12 persons Two for 13-25 persons
5	Drinking Water Fountain	One for 100 persons or part thereof			
6	Cleaner's sink	One per floor			
7	Shower Bathing	As per Trade requirements			

Note: i) One Water tap with drawing arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closets and urinals.
ii) it may be assumed that two thirds of the number is males and one third females.

TABLE-A.14 Sanitation Requirements for Assembly Buildings (Art, Galleries, Libraries and Museums)

Sl.No.	Sanitary Unit	For Public		For Staff	
		Male	Female	Male	Female
1	Water Closet (W.C.)	One for 200 persons upto 400 persons. Forever 400 persons add at the rate of 1 per 250 persons or part thereof	Four for 100 persons upto 200 persons. For over 200 persons add at the rate of 1 per 50 persons or part thereof	One for 1-15 persons. Two for 16-35 persons.	Two for 1-132 persons. Four for 13-25 persons, add at the rate of 1 per 6 persons.
2	Ablution	One in each W.C.	One in each	One in each	One in each

	Taps		W.C.	W.C.	W.C.
3	Urinals	One for 50 persons or part thereof	--	Nil upto 6 persons One for 7-20 persons Two for 21-45 persons	--
4	Wash Basins	One for every 200 persons or part thereof. For over 400 persons add at the rate of 1 per 250 persons or part thereof.	One for every 200 persons or part thereof. For over 200 persons add at the rate of 1 per 150 persons or part thereof.	One for 1-15 persons Two for 16-35 persons	One for 1-12 persons Two for 13-25 persons
5	Cleaner's Sink	One per floor, minimum			
6	Drinking Water Fountain	One per 100 persons or part thereof			
7	Shower / Bath	As per trade requirements			

Note:- It may be assumed that two thirds of the numbers are males and one third females.

TABLE-A.15 Sanitation Requirements for Restaurants

Sl.No.	Sanitary Unit	For Public		For Staff	
		Male	Female	Male	Female
1	Water Closet (W.C.)	One per 50 seats upto 200 seats. Forever 200 seats add at the rate of 1 per 100 seats or part thereof.	One per 25 seats upto 200 seats. Forever 200 seats add at the rate of 1 per 50 seats or part thereof.	1 for 15 persons. 2 for 16-35 persons. 3 for 36-65 persons. 4 for 66-100 persons.	2 per 1-12 persons. 4 for 13-25 persons. 6 for 26-40 persons. 8 for 41-57 persons. 10 for 58-77

					persons. 12 for 78-100 persons.
2	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3	Urinals	One for 50 persons or part thereof	--	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons.	--
4	Wash Basins	One for every water closet.			
5	Kitchen Sinks & Dish Washer	One per each Kitchen			
6	Service Sink	One in the restaurant.			

Note:

i) It may be assumed that two thirds of the numbers are males and one-third females.

ii) One water tap with drawing arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closets and urinal.

Table-A.16 Sanitation Requirements for Factories

Sl.No.	Sanitary Units	For Male Personal	For female Personal
1.	Water Closet	1 for 15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons For 101 to 200 persons add at rate of 3% Form over 200 persons add at the rate of 2.5%.	2 for 1-12 persons 4 for 13-25 persons. 6 for 25-40persons 8 for 41-57 persons 10 for 58-77 persons. 12 for 78-100 persons. For 101 to 200 persons add at the rate of 3% From over 200 persons add the rate of 2%

2.	Ablution Taps	One in each W.C.	One in each W.C.
3.	Urinals	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 persons add at the rate of 3% for over 200 persons add at the rate of 2.5%.	--
4.	Washing Taps with draining arrangement	One for every 25 persons or part thereof.	
5.	Drinking Water Fountains	One for every 100 persons with a minimum of one on each floor.	
6.	Baths Preferably Showers	As required for particulars trade or occupation	
7.	Emergency Shower and eye wash fountain	1 per every shop floor per 500 person.	

Note:

i) For many trades of a dirty or dangerous character, more extensive provisions are required.

ii) One water tap with draining arrangement shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinal.

iii) Crèche where provided shall be fitted with water closed (One for 10 persons or part thereof) Wash Basins (1 for 15 persons or part thereof) and drinking water tap with drinking arrangement for every 50 persons or part thereof.

Table-A.17 Sanitary Requirements for Large Stations and Airports

Sl.No.	Place	W.C. for Males	W.C. for females	Urinals for Males only
1.	Junction Stations, Intermediate	3 for first 1000 persons, add 1 for subsequent 1000	8 for first 1000 persons, add 1 for every additional	4 for every 1000 persons, add 1 for every additional 1000

	Stations and Substations	persons or part thereof	1000 persons or part thereof.	persons or part thereof.
2.	Terminal Stations and Bus Terminals	4 for first 1000 persons and 1 for every additional 1000 persons or part thereof.	10 for every 1000 persons and 1 for every additional 1000 persons or part thereof.	6 for every 1000 person and 1 for every additional 1000 persons or part thereof.
3.	Domestic Airports Minimum. For 200 persons For 400 persons For 600 persons For 800 persons For 1000 persons	2* 5 9 12 16 18	4* 16 30 40 52 58	1 per 40 persons or part thereof.
4.	International Airports For 200 persons For 600 persons For 1000 persons	6 12 18	20 40 58	1 per 40 person or part thereof.

Note:

i) Provision for wash basins, baths including shower stall, shall be in accordance with part ix section 2- Drainage and Sanitation of National Building Code of India.

* At least on India style water closed shall be provided in each toilet. Assume 60% males and 40% females in any area.

* At least 50% of female WCs may be Indian pan and 50% EWC.

Table-A.18 General Standards/ Guidelines for Public Toilets in Public Area

Public Toilet	On roads and for open areas: At every 1Km, including in parks, plaza, open air theatre, swimming area, car parks, fuel stations. Toilets shall be disabled- friendly and in 50-50 ration (M/F). Provision may be

	made as for Public Rooms (Table 4.10 Contd)
Signage	Signboard on main streets shall give directions and mention the distance to reach the nearest public convenience. Toilets shall have multi- lingual signage for the convenience of visitors. Helpline number shall be pasted on all toilets for complaints/quires.
Modes	Pay and use or free. In pay and use toilets entry is allowed on payment to the attendant or by inserting coin and user gets 15 minutes.
Maintenance/Cleaning	The toilet should have both men and women attendants. Alternatively automatic cleaning cycle covering flush, toilet bowl, seat, hand wash basin, disinfecting of floor and complete drying after each use can be adopted, which takes 40 seconds. Public toilet shall be open 24 hours.

Table-A.19 Contingency Toilet facilities for Special Events

Sl.No.	Patrons	For Males			For Females	
		Toilets	Urinals	Sinks	Toilets	Sinks
1.	<500	1	2	2	6	2
2.	<1000	2	4	4	9	4
3.	<2000	4	8	6	12	6
4.	<3000	6	15	10	18	10
5.	<5000	8	25	17	30	17

Source:

1. FEMA "Special Events Contingency Planning: Toilets Page 39
2. Jain. AK, ""Spatio Economic Development Record", Clause 5.16-5-20
3. "Public Toilets for Women in India", Volume 18 No.5, September- October, 2011.

ANNEXURE – 6

ADOPTION OF ENERGY CONSERVATION BUILDING CODE [ECBC] IN ANDHRA PRADESH

'Energy Conservation Building Code' or 'ECBC' is the energy code adopted by the Bureau of Energy Efficiency in 2007 and revised in 2008, that provides the minimum requirements for energy-efficient building design and construction. The Energy Conservation Building Code (2008) when locally adapted to Andhra Pradesh's climate is termed as the "Andhra Pradesh Energy Conservation Building Code (APECBC)." All definitions included in the Energy Conservation Building Code (2008) and not otherwise

TABLE-A.9

defined herein are applicable to the Andhra Pradesh Energy Conservation Building Code." **Accordingly the Government of Andhra Pradesh while adopting the Energy Conservation Building Code (ECBC) amended the Andhra Pradesh Building Rules, 2012 and issued the notification in G. O. Ms. No. 30 Dated: 28.01.2014 as given in the Annexure.**

EXTRACT OF ANDHRA PRADESH ENERGY CONSERVATION BUILDING CODE

(see "Andhra Pradesh Energy Conservation Building Code (APECBC).")

ANDHRA PRADESH BUILDING RULES 2017

LIST OF FORMS

FORM No.	TITLE OF THE FORM
1	**Application form for License of Builder /Developer /Construction Firm**
2	**Undertaking for obtaining the License of Builder/Developer /Construction Firm**
3	**License of Builder /Developer/Construction Firm**
4	**Application form for License of Technical Personnel**
5	**License of the Technical Personnel**
6	**Building Permission Application**
7	**Building Work Supervision**
8	**Building Permission Order**
9	**Building Permission Refusal Order**
10	**Building Permission Revalidation Order**
11	**Building Commencement Notice**
12	**Building Completion Notice**
13	**Building Occupancy Certificate**

FORM-1

APPLICATION FORM FOR LICENCE OF BUILDER /DEVELOPER /CONSTRUCTION FIRM

To **The Commissioner,** **...........................(ULB)** Sir, I, the undersigned request that my name/firm may kindly be enrolled as licensed Builder/Developer/Construction Firm.	Affix Latest Photograph

1	Applied for	BUILDER /DEVELOPER/CONSTRUCTION FIRM
2	Application for License	FIRST TIME / RENEWAL
3	Name of the Applicant/Firm (in block letters)	
4	Name of the Authorized Person: (in case firm) (in block letters)	
5	Father's Name	
6	Full Address of the applicant / Firm	
7	Qualifications (Academic and Technical)	
8	Experience	
9	Any other special qualification possessed Which requires consideration.	
10	Whether enclosed copies of the Income Tax Assessment as required on the regulation 3.3	
11	License fee details	
i.	Amount (Rs.)	
ii.	D.D. No.	D.D. Date d d m m y y Drawn on

12	If License is intended for a firm, the following particulars of the technical employees shall be given along with the certified copies of the qualifications.			
SI. No.	**Name of the employee**	**Qualifications**	**Designation**	**Signature**
Date: dd/mm/yyyy Signature of the applicant				
Encl: 1. Demand Draft; 2. Proof of qualifications;3. Copy of PAN Card; 4. Copy of Income Tax Assessment 5. Experience Certificate; 6. Passport size photographs 3 Nos [including one to be affixed to this]				

FORM – 2

UNDERTAKING FOR OBTAINING THE LICENCE OF BUILDER/DEVELOPER /CONSTRUCTION FIRM

(Notarized Under taking to be executed on Rs.100/- N.J. Stamp Paper)

I……………………………………….. S/D/W/o ………………………….. Aged about............ Years, R/o ………………………………………………………. Situated at ……………………………………….. , ……………………………………………………………. (ULB) do hereby solemnly affirm and state that;

I submit that I am aware about the provisions contained in the Regulations under rules in force for Builder/Developer/Construction Firm License of …………………..(ULB)

I submit that, I possess the required qualification of Engineer as prescribed in Rule 3.1 of the Regulations for Builder/Developer/Construction Firm License and I am with my free consent working in the company ……………………………………………., I, further undertake all the responsibility as a Civil Engineer of the Firm and will be responsible for all the projects done by my Firm. If any misrepresentation / violation on my supervision, I will be held personally responsible for any consequences aroused now and in future and the competent authority is at liberty to initiate any action upon me including cancellation of Builders License or any other action enforced by the .... (ULB).

Signed & Sworn before me on this day of ………………………………………

DATE: dd/mm/yyyy

Place:

DEPONENT

<u>WITNESS:</u>

1.

2.

NOTORY

FORM-3

…………………… (Emblem and Name of the ULB)

LICENSE OF BUILDER /DEVELOPER/CONSTRUCTION FIRM				
1.	**Reference No.**			Affix latest passport size photograph of the applicant or authorized person
2.	**License No.**			
3.	**Issued on**			
4.	**Valid up to**			
5.	**Name of the Builder/Developer/ Construction Firm**			
6.	**Father's Name**			
7.	**Applicant's Name**			
8.	**Applicant's Address**			
	Door No. / Flat No.			
	Road / Street			
	Locality			
	City		PIN	
	Mandal	**District**		
9	**Phone No.**	Office		
		Mobile		

10	**Mail id**	

The Licensee shall comply and adhere to the conditions, duties and responsibilities as prescribed in the "**Regulations for Registration of Licensed Builder / Developer / Construction Firm of .... (ULB)**".

Signature of Licensing Authority

......................(ULB)	**Office Stamp**

FORM – 4

.... (Emblem & Name of the ULB)

APPLICATION FORM FOR LICENSE OF TECHNICAL PERSONNEL

To
The Commissioner,
……………………….(ULB)

Sir,

Sub:- Application for License of Technical Personnel – Architect / Engineer / Structural Engineer / Supervisor / Surveyor / Town Planner - Reg

I, the undersigned request that I may kindly be enrolled as Licensed Architect/Engineer/Structural Engineer/Supervisor/Surveyor/Town Planner. I furnish herewith the following particulars:

Affix Latest Photograph

1	Category of License		
2	Full name of the applicant		
3	S/D/W/o		
4	First License No. & Year [if any]		
5	Qualification [Academic & Technical]		
6	Experience		
7	Address in full		
8	E mail id		
9	Phone	Office	
		Mobile	
10	License fee details		
i.	Amount (Rs.)		
ii.	D.D.No.	D.D.Date	
iii.	Bank	Branch	

I am well acquainted with all the provisions contained in Building Rules and National Building Code in respect of planning and permission for construction of a building and assure to adhere to the same strictly without giving any scope for violation or deviation.

Date: dd/mm/yyyy **Signature of the Applicant**

ENCLOSURES:

1) Specimen signatures in one sheet of paper [12 Nos.]; Xerox copy of previous License, if any.
2) Recent Photographs [3 Nos.][including the one affixed to this application]
3) Attested Copy of Degree / Diploma Certificate.
4) Demand Draft for prescribed license fee: :
5) New Enrollment Fee and Security Deposit:
[Not applicable for Architects registered with Council of Architecture and they are entrusted in empanelment and inclusion of the ....(ULB)]
6) Certificate of Registration with Council of Architecture with up to date fees paid.

FORM – 5

……………………… **(Emblem & Name of the ULB)**

LICENSE OF THE TECHNICAL PERSONNEL
Architect/Engineer/Structural Engineer/Supervisor/Surveyor/Town Planner

License No.	**LTP**						ULB ABBREVIATION	**Y**	**Y**	**Y**	**Y**	DATE	d	d	m	m	y	y
Validity	**FROM**	d	d	m	m	y	y	y	y	**TO**	d	d	m	m	y	y	y	y

NAME														**PHOTO**
DOOR No. / FLAT No.														
ROAD/STREET														
VILLAGE	MANDAL													
CITY/TOWN														
DISTRICT														
E-MAIL														
PHONE	Office													
	MOBILE													**Signature of the Licensee**

Ref: Your Application No. ……………………………………….submitted on dd/mm/yyyy.

Your Application in the reference cited has been examined and the License is issued to function as Licensed Technical Personnel [Architect/Engineer/Structural Engineer/Supervisor/Surveyor/Town Planner].

The license is not transferable to any other person and should be produced by the Licensee whenever required to do so by the authority.

The Licensee is bound to comply with all the conditions and duties of Licensed Technical Personnel. Any failure on the part of licensee to abide by or comply with any of the conditions will entail not only a fine imposed by the Commissioner but also for recovery of any loss caused to the ULB. The security deposit paid will also be forfeited and action will be taken for cancellation of the License. Further the Licensee will be liable for all the necessary consequences of penal action, if any, instituted against Him / Her including any civil liability.

Signature of the Licensing Authority
(Office Stamp)

Note: *Xerox Copy of this license shall be enclosed to every building application submitted. Please see competence and duties of Licensed Technical Personnel.*

FORM - 6

…………………(ULB)

BUILDING PERMISSION APPLICATION

FILE No.	ULB ABBREVIATION	BP	ZONE	CIR	WD				

Date	d	d	m	m	y	y	y	y

To
The Commissioner,
…………………………………………..(ULB) (Use CAPITAL LETTERS only)

A	ADDRESS OF THE APPLICANT												
1	NAME												
2	DOOR No. / FLAT No.												
3	ROAD/STREET												
4	VILLAGE	MANDAL											
5	CITY/TOWN			PIN									
6	DISTRICT												
7	E-MAIL												
8	PHONE	MOBILE											
		ALTERNATE											

B	LOCATION OF THE PROPOSED SITE			
1	PLOT NOs.			
2	SANCTIONED LAYOUT NO. / LRS NO.			
3	SURVEY NO.	VILLAGE		
4	PREMISES / DOOR No.			
5	ROAD/ STREET			
6	WARD NO.	BLOCK No.		
7	LOCALITY			
8	CIRCLE/	DIVISION		
9	CITY/ TOWN	DISTRICT		

C	DETAILS OF THE PROPOSED CONSTRUCTION				
1	SITE AREA (IN SQ. M)	(a) AS PER DOCUMENTS	(b) AS PER SUBMITTED PLAN	(c)ROAD WIDENING AREA	(d) NET AREA
2	NO. OF FLOORS	CELLAR	STILT	GROUND	UPPER FLOOR	TOTAL

					S	

3	FLOOR AREA (IN SQ.M)	
4	PARKING FLOOR AREA (IN SQ.M)	
5	USE OF THE BUILDING	INDIVIDUAL RESIDENTIAL/GROUP HOUSING/ COMMERCIAL/ INSTITUTIONAL/ROW HOUSING/OTHERS (SPECIFY) _ _ _ _ _ _ _ _ _

D	**DETAILS OF THE LICENSED TECHNICAL PERSONNEL:**		
SL.NO	**NAME**	**ADDRESS**	**LICENSE NO.**
1	.... BUILDER / DEVELOPER/ CONSTRUCTION FIRM		
2	.... ARCHITECT		
3	.... ENGINEER		
4	.... STRUCTURAL ENGINEER		
5	.... SUPERVISOR/SURVEYOR		
6	.... TOWN PLANNER		

CERTIFICATE

I/ we declare that I am / we are the absolute/ owner/ owners/ lessee of the land on which I/we intend to erect the Building and am / are enclosing copies of relevant document of ownership/ lease certified by Magistrate/ Notary public/ a Gazetted Officer authorized by the Commissioner in this behalf.

I/ we have gone through the Building Regulations made under the provisions of the A.P. Building Rules and have satisfied myself/ourselves that the site and building plans are in accordance with provisions contained therein.

SL. NO.	NAME OF OWNER / LICENSED PERSONNEL	SIGNATURE
1	.... OWNER / OWNERS / LESSEE / AUTHORISED AGENT	
2	.... BUILDER / DEVELOPER / CONSTRUCTION FIRM	
3	.... ARCHITECT	
4	.... ENGINEER	
5	.... STRUCTURAL ENGINEER	
6	.... SUPERVISOR/SURVEYOR	
7	.... TOWN PLANNER	

FORM - 7

BUILDING WORK SUPERVISION

To The Commissioner, ...(ULB).	Dat	d	d	m	m	y	y	y	y

Sir / Madam,
I hereby certify that the erection, re-erection or material alteration or demolition at House/ Premises No/ Plot as given below shall be carried out under the supervision of qualified technical personnel and I certify that all the materials (Type and grade) and the workmanship of the work shall be generally in accordance with the general and detailed specifications submitted along with, and that the work shall be carried out according to the sanctioned plans.

(Use CAPITAL LETTERS only)

A	NAME OF THE APPLICANT	
B	LOCATION OF THE PROPOSED SITE	

1	PLOT No.			
2	SANCTIONED LAYOUT No. / LRS No.			
3	SURVEY No.	VILLAGE		
4	PREMISES / DOOR No.			
5	WARD No.	BLOCK No.		
6	ROAD/ STREET			
7	LOCALITY			
8	CIRCLE	DIVISION		
9	CITY/TOWN	PIN		

C	**DETAILS OF OWNER / DEVELOPER / LICENCED TECHNICAL PERSONNEL**		
SL. NO.	**NAME**	**LICENCE No.**	**SIGNATURE**
1	…………………………………………………. OWNER / OWNERS / LESSEE / AUTHORISED AGENT		
2	…………………………………………………. BUILDER / DEVELOPER / FIRM		
3	…………………………………………………. ARCHITECT		
4	…………………………………………………. ENGINEER		
5	…………………………………………………. STRUCTURAL ENGINEER		
6	…………………………………………………. SURVEYOR		
7	…………………………………………………. TOWN PLANNER		

FORM - 8

………………. (Emblem & Name of the ULB)

TOWN PLANNING SECTION
BUILDING PERMISSION ORDER

TO

Sri / Smt.

FILE No.								**yyyy**
PERMIT No.								
Date	d	d	m	m	y	y	y	y

Sir / Madam,

Sub: Building Permission – Sanctioned – Reg.

Ref: Your Application dated: …………………..

Your application submitted in the reference has been examined with reference to the rules and regulations in force and permission is hereby sanctioned conditionally as detailed below:

A	**APPLICANT AND LICENSED PERSONNEL DETAILS:**			
1	Applicant			
2	Developer / Builder		Lic.No.	
3	Licensed Technical Person		Lic No.	
4	Structural Engineer		Lic.No.	
5	Others			
B	**SITE DETAILS**			
1	T.S.No.			
2	Premises No			
3	Plot No.			
4	Layout / Sub Divn. No.			
5	Street			
6	Locality			
7	Town/ City		PI	

C	**DETAILS OF PERMISSION SANCTIONED**							
1	Floors	Ground		Upper floors		Parking floors		
2	Use	No.	Area (m^2)	No.	Area(m^2)	Level	No.	Area(m^2)
a	Residential					Cellar		
b	Commercial					Stilt		
c	Others					U. Floors		
d	No of floors ( )		--		--			--
3	Setbacks (m)	Front		Rear		Side I	Side II	
4	Site Area (m^2)							
5	Road affected area (m^2)							
6	Net Area(m^2)							
7	Tot-lot Area (m^2)							
8	Height (m)							
9	No. of RWHPs							
10	No. of Trees							
11	Others							

D	**DETAILS OF FEES PAID (RS.) TOTAL :**				
1	Building Permit Fee		7	Impact Fee	
2	Development Charges		8	City Level Infra. Imp. Fee	
3	Betterment Charges:		9	Compounding Fee	

4	Ext. Betterment Charges		10		
5	Sub-Division Charges		11		
6	Open space Charges		12		

E	**OTHER DETAILS :**																
1	Contractor's all Risk Policy No.		Dt	d	d	m	m	y	y	Valid Upto	d	d	m	m	y	y	

2	Notarised Affidavit No		Dt:		Floor handed over		Area (m^2)	
3	Entered in prohibitory property watch register Sl.No.		Dt:		S.R.O.			

F	**Construction to be Commenced Before**	d	d	m	m	y	y	y	y
G	**Construction to be Completed Before**	d	d	m	m	y	y	y	y

The Building permission is sanctioned subject to following conditions:
Commissioner

The Building permission is sanctioned subject to following conditions:

1. **The permission accorded does not confer any ownership rights; at a later stage if it is found that the documents are false and fabricated the permission will be revoked.**
2. **If construction is not commenced within one year, building application shall be submitted afresh duly paying required fees.**
3. **Sanctioned Plan** shall be followed strictly while making the construction & shall be displayed at the site.
4. **Commencement Notice** shall be submitted by the applicant before commencement of the building.
5. **Completion Notice** shall be submitted after completion of the building.
6. **Occupancy Certificate** is compulsory before occupying any building.
7. **Public Amenities** such as Water Supply, Electricity Connections will be provided only on production of occupancy certificate.
8. **Prior Approval should be obtained separately for any modification in the construction.**
9. **Tree Plantation** shall be done along the periphery and also in front of the premises.
10. **Tot-lot** shall be fenced and shall be maintained as greenery at owners cost before issue of occupancy certificate.
11. **Rain Water Harvesting Structure** (percolation pit) shall be constructed.
12. **Space for Transformer** shall be provided in the site keeping the safety of the residents in view.
13. **Garbage House** shall be made within the premises.

14. **Cellar and stilts approved for parking** in the plan should be used exclusively for parking of vehicles without partition walls & rolling shutters and the same should not be converted or misused for any other purpose.
15. This sanction is accorded on surrendering of **Road affected portion of the site** to …………(ULB) at free of cost with out claiming any compensation at any time as per the undertaking submitted.
16. **Stocking of Building Materials** on footpath and road margin causing obstruction to free movement of public & vehicles shall not be done, failing which permission is liable to be suspended.
17. The Developer/Builder/Owner to provide service road wherever required with specified standards at their own cost.
18. A safe distance from Electrical Lines shall be followed as per rules.
19. If greenery is not maintained 10% additional property tax shall be imposed as penalty every year till the condition is fulfilled.
20. All Public and Semi Public buildings shall provide facilities to physically handicapped persons.
21. The mortgaged built up area shall be allowed for registration only after an Occupancy Certificate is produced.
22. The Registration authority shall register only the permitted built up area as per sanctioned plan.
23. The Financial Agencies and Institutions shall extend loans facilities only to the permitted built up area.
24. The Services like Sanitation, Plumbing, Fire Safety requirements, lifts, electrical installations etc., shall be executed under the supervision of Qualified Technical Personnel.
25. **Architect / Structural Engineer** if changed, the consent of the previous Architect / Structural Engineer is required and to be intimated to the Commissioner.
26. Construction shall be covered under the contractors all risk Insurance till the issue of occupancy certificate (wherever applicable).
27. **As per the undertaking executed in terms of A.P. Building Rules,**
    a. The construction shall be done by the owner, only in accordance with sanctioned Plan under the strict supervision of the Architect, Structural Engineer and site engineer failing which the violations are liable for demolition besides legal action.
    b. The owner, builder, Architect, Structural Engineer and site engineer are jointly & severely responsible to carry out and complete the construction strictly in accordance with sanctioned plan.
    c. The Owner, Builder, Architect, Structural Engineer and Site Engineer are jointly and severely are held responsible for the structural stability during the building construction and should strictly adhere to all the conditions.
    d. The Owner / Builder should not deliver the possession of any part of built up area of the building, by way of Sale / Lease unless and until Occupancy Certificate is obtained from ULB after providing all the regular service connections to each portion of the building and duly submitting the following.
        (i) Building Completion Notice issued by the LTP duly certifying that the building is completed as per the sanctioned plan.
        (ii) Structural Stability Certificate issued by the Structural Engineer duly certifying that the building is structurally safe and the construction is in accordance with the specified designs.
        (iii) An extract of the site registers containing inspection reports of Site Engineer, Structural Engineer and Architect.
        (iv) Insurance Policy for the completed building for a minimum period of three years.
28. **Structural Safety and Fire Safety Requirements** shall be the responsibility of the Owner, Builder/ Developer, Architect and St. Engineer to provide all necessary Fire Fighting installations as stipulated in National Building Code of India, 2005 like;

i) To provide one entry and one exit to the premises with a minimum width of 4.5mts. and height clearance of 5mts.
ii) Provide Fire resistant swing door for the collapsible lifts in all floors.
iii) Provide Generator, as alternate source of electric supply.
iv) Emergency Lighting in the Corridor / Common passages and stair case.
v) Two numbers water type fire extinguishers for every 600 Sq.mts. of floor area with minimum of four numbers fire extinguishers per floor and 5k DCP extinguishers minimum 2 Nos. each at Generator and Transformer area shall be provided as per I.S.I. specification No.2190-1992.
vi) Manually operated and alarm system in the entire buildings;
vii) Separate Underground static water storage tank capacity of 25, 000 lits. Capacity.
viii) Separate Terrace Tank of 25,000lits capacity for Residential buildings;
ix) Hose Reel, Down Corner.
x) Automatic Sprinkler system is to be provided if the basement area exceed 200 Sq.mts.
xi) Electrical Wiring and installation shall be certified by the electrical engineers to ensure electrical fire safety.
xii) Transformers shall be protected with 4 hours rating fire resist constructions.
xiii) To create a joint open spaces with the neighbours building / premises for maneuverability of fire vehicles. No parking or any constructions shall be made in setbacks area.

BY ORDER

COMMISSIONER

Copy to
1. The Town Planning Section Head
2. The Officer concerned, Property Tax Section
3. The Municipal Engineer [Water Department]
4. The A.P. TRANSCO…………..Circle,
5. The Officer concerned, Stamps and Registration Department
6. The Officer concerned, A.P. Disater Response & Fire Service Department

FORM - 9

……………… (Emblem & Name of the ULB)

TOWN PLANNING SECTION
BUILDING PERMISSION REFUSAL ORDER

TO

Sri / Smt.

FILE No.								yyyy
Date	d	d	m	m	y	y	y	y

Sir / Madam,

Sub: Building Permission – REFUSED – Reg.

Ref: Your Application dated: …………………..

Your application submitted in the reference has been examined with reference to the rules and regulations in force and permission is hereby refused for the reasons as detailed below:

A	**APPLICANT AND LICENSED PERSONNEL DETAILS:**									
1	Applicant									
2	Developer / Builder		Lic.No.							
3	Licensed Technical Person		Lic No.							
4	Structural Engineer		Lic.No.							
5	Others									
B	**SITE DETAILS**									
1	T.S.No.									
2	Premises No									
3	Plot No.									
4	Layout / Sub Divn. No.									
5	Street									
6	Locality									
7	Town/ City			PI						
C	**REASONS FOR REFUSAL OF BUILDING PERMISSION**									
1										
2										
3										
4										
5										
Yours Faithfully **Commissioner**										

FORM - 10

………………. (Emblem & Name of the ULB)

TOWN PLANNING SECTION
BUILDING PERMISSION REVALIDATION ORDER

TO

Sri / Smt.

FILE No.							yyyy
PERMIT No.							
Date	d	d	m	m	y	y	y	y

Sir / Madam,

Sub: Building Permission – Revalidation – Orders - Issued – Reg.

Ref: Your Application for Revalidation dated: …………………..

Your application for Building Permission Revalidation submitted in the reference has been examined with reference to the rules and regulations in force and the Revalidation Order is hereby issued conditionally as detailed below:

A	**APPLICANT AND LICENSED PERSONNEL DETAILS:**						
1	Applicant						
2	Developer / Builder					Lic.No.	
3	Licensed Technical Person					Lic No.	
4	Structural Engineer					Lic.No.	
5	Others						
B	**SITE DETAILS**						
1	T.S.No.						
2	Premises No						
3	Plot No.						
4	Layout / Sub Divn. No.						
5	Street						
6	Locality						
7	Town/ City					PI	
C	**DETAILS OF REVALIDATION**						
1	Floors	Ground		Upper floors		Parking floors	
2	Use	No.	Area (m^2)	No.	Area(m^2)	Level	No.	Area(m^2)
a	Residential					Cellar		
b	Commercial					Stilt		
c	Others					U. Floors		
d	No of floors ( )		--		--			--
3	Setbacks (m)	Front		Rear		Side I	Side II	
4	Site Area (m^2)							
5	Road affected area (m^2)							
6	Net Area(m^2)							
7	Tot-lot Area (m^2)							
8	Height (m)							
9	No. of RWHPs							
10	No. of Trees							
11	Others							
D	**DETAILS OF FEES PAID (RS.) TOTAL :**						

1	Building Permit Fee		7	Impact Fee	
2	Development Charges		8	City Level Infra. Imp. Fee	
3	Betterment Charges:		9	Compounding Fee	
4	Ext. Betterment Charges		10		
5	Sub-Division Charges		11		
6	Open space Charges		12		

E	**OTHER DETAILS :**																
1	Contractor's all Risk Policy No.				Dt	d	d	m	m	y	y	Valid Up to	d	d	m	m	y	y
2	Notarised Affidavit No		Dt:		Floor Level handed over							Area (m^2)						
3	Entered in prohibitory property watch register Sl.No.		Dt:		S.R.O.													
F	**Construction to be Completed Before**				d	d	m	m	y	y	y	y						

The Building Permission Revalidation is sanctioned subject to following conditions:
Commissioner

FORM – 11

.... **(Emblem & Name of the ULB)**

TOWN PLANNING SECTION

BUILDING COMMENCEMENT NOTICE **(To be submitted by Owner/Builder/Developer)**							
To **The Commissioner,** **............................(ULB)**	**Date**	d	d	m	m	y	y
Ref: **FILE No.**							

	Building Permit / Proceedings No.		Date	d	d	m	m	y	y

Sir / Madam,

I/We hereby give notice that the work of the construction will be commenced on (Date) **…………………** as per the details of the Sanctioned Plan as given below. *(Due date for commencement of work is given in Building Permit Order)*

A	**NAME OF THE APPLICANT**				
B	**LOCATION OF THE PROPOSED SITE**				
1	Plot No.				
2	Sanctioned Layout No. / LRS No.				
3	Survey No.	Village			
4	Premises / Door No.				
5	Ward No.	Block No.			
6	Road/ Street				
7	Locality				
8	Circle	Division			
9	City/ Town	District			

C	**DETAILS OF THE SANCTIONED PLAN**					
1	Building Permit / Proceedings No			Date	d d m m y y y y	
2	Site Area (m^2)	As per Documents	As per submitted Plan	Road Widening Area	Net Area	
3	Floors as per Sanctioned Plan	Cellar	Stilt	Ground	Upper Floors	
4	Number					
5	Use					
6	Floor Area (m^2)					
7	Parking Area (m^2)					
8	Setbacks (m)	Front	Rear	Side I	Side II	
9	Height (m)					

D	**DETAILS OF OWNER/DEVELOPER/LICENCED TECHNICAL PERSONNEL**		
Sl. No.	**Name**	**Licence No.**	**Signature**
1	…………………………………………………. Owner / Owners / Lessee / Authorised Agent		
2	…………………………………………………. Builder / Developer /Firm		

3	……………………………… Architect		
4	……………………………………………………. Engineer		
5	……………………………………………………. Structural Engineer		
6	……………………………………………………. Surveyor		
7	……………………………………………………. Town Planner		

FORM – 12

…………………………… (Emblem & Name of the ULB)

BUILDING COMPLETION NOTICE (To be submitted along with other relevant documents)												
REF			D T	d	d	m	m	y	y	y	y
	FILE No.											
	Building Permit /Proceedings No.		D T	d	d	m	m	y	y	y	y
	Building Commencement Notice submitted by the Applicant		D T	d	d	m	m	y	y	y	y

To
The Commissioner,
………………………(ULB)

I/ We hereby give notice that the erection of the building / erection of works have been completed as per Sanctioned Building Plan. The work has been completed to my/our best satisfaction. The workmanship and all the materials (type and grade) have been used strictly in accordance with general and detailed specifications. No provisions of the Building Bye-Laws/Rules, conditions prescribed or orders issued thereunder have been transgressed in the course of the work. I/We hereby enclose the plan of the building completed in all aspects. The land is fit for which it has been developed or redeveloped and the building is fit for use for which it has been erected, re-erected or altered, constructed and enlarged. The necessary occupancy certificate may be issued. Any subsequent changes from Completion Drawings will be the responsibility of the owner(s).

(Use CAPITAL LETTERS only)

A	**NAME OF THE OWNER / /BUILDER/DEVELOPER/FIRM**			
B	**LOCATION OF THE PROPOSED SITE**			
1	Plot No.			
2	Sanctioned Layout No. / LRS No.			
3	Survey No.	Village		

4	Premises / Door No.														
5	Road/ Street														
6	Ward No.		Block No.												
7	Locality														
8	Circle		Division												
9	City/ Town	District													
C	**DETAILS OF THE COMPLETED BUILDING**														
1	**Building Permit /Proceedings No.**				DT	d	d	m	m	y	y	y	y		
2	a	Due date for Completion of the Building			DT	d	d	m	m	y	y	y	y		
	b	Date on which Completion Notice Submitted			DT	d	d	m	m	y	y	y	y		
	c	Whether the Building is completed within the stipulated time			YES				NO						
	d	If No, the Fine to be paid			Rs .										

3	**Site Area (m^2)**	As per Documents	As per submitted Plan	Road Widening Area	Net Area

4		**No. of Floors**	Cellar	Stilt	Ground	Upper floors
	a	As per Sanctioned Plan				
	b	As per Completed Building Plan				
5		**Use of the Building**				
	a	As per Sanctioned Plan				
	b	As per Completed Building Plan				
6		**Floor Area (m^2)**				
	a	As per Sanctioned Plan				
	b	As per Completed Building Plan				
7		**Parking Area (m^2)**				
	a	As per Sanctioned Plan				
	b	As per Completed Building Plan				
8		**Setbacks(m)**	Front	Rear	Side I	Side II
	a	As per Sanctioned Plan				
	b	As per Completed Building Plan				
	c	Extent of deviation in %				
	d	Fine to be Paid (Rs)				
9		**Height (m)**	As per Sanctioned Plan		As per Completed Building Plan	

10	**Rain Water Harvesting Pits**		
11	**Solar Roof Top System**		
12	**Recycle of Waste Water**		

D	**DETAILS OF OWNER / DEVELOPER / LICENCED TECHNICAL PERSONNEL**		
Sl. No.	**Name**	**Licence No.**	**Signature**
1	………………………………………………………………. Owner / Owners / Lessee / Authorised Agent		
2	………………………………………………………………. Builder / Developer		
3	………………………………………………………………. Architect		
4	………………………………………………………………. Engineer		
5	………………………………………………………………. Structural Engineer		
6	………………………………………………………………. Surveyor		
7	………………………………………………………………. Town Planner		

Enclosures:
1. Copy of the Sanctioned Plan
2. Copy of the Building Permit Order
3. Copy of the Completed Building Plan showing the changes if any to Approved Building Plan along with a statement of deviations.
4. Photographs of constructed building showing setbacks on four sides, elevation and roof level
5. Land value certificate issued by Registration Department (If deviations are made to Sanctioned Plan)

FORM -13

……………………………. (Emblem & name of the ULB)

BUILDING OCCUPANCY CERTIFICATE

Ref:	**Building Permit / Proceedings No**		**Dat**	**dd**	**mm**	**yyyy**
	Building Commencement Notice submitted by the Applicant		**Dat**	**dd**	**mm**	**yyyy**
	Building Completion Notice submitted by the Applicant		**Dat**	**dd**	**mm**	**yyyy**
	FILE No.					

The Owners/Builder/Developer /Licensed Architect/Engineer / Structural Engineer have given the Building Completion Notice that the building has been completed as per the specifications of Sanctioned Plans and it is declared that the building conforms in all respects to the requirements of the building regulations contained under the statutory provisions in the respective Municipal Act and Building Bye Laws/Rules issued by the Govt.

This is to certify that the building has been inspected and is declared fit for occupation.

(Use CAPITAL LETTERS only)

A	**NAME OF THE OWNER / DEVELOPER**						
B	**LOCATION OF THE PROPOSED SITE**						
1	Plot No.						
2	Sanctioned Layout No. / LRS No.						
3	Survey No.	Village					
4	Premises / Door No.						
5	Road/ Street						
6	Ward No.	Block No.					
7	Locality						
8	Circle	Division					
9	City/ Town	District					
C	**DETAILS OF THE COMPLETED BUILDING**						
1	Building Permit / Proceedings No.			**Dat**	**dd**	**m m**	**yyyy**
2	a	Due date for completion of the building		**Dat**	**dd**	**m m**	**yyyy**
	b	Date on which completion notice submitted		**Dat**	**dd**	**m m**	**yyyy**
	c	Whether it is completed within the stipulated time		Yes		No	
	d	If No, the Fine collected (Rs)					
3	**Site Area (m^2)**	As per Documents	As per submitted Plan	Road Widening Area	Net Area		
4	**No. of Floors**		Cellar	Stilt	Ground	Upper floors	
	a	As per Sanctioned Plan					
	b	As per Completed Building Plan					
5	**Use of the Building**						
	a	As per Sanctioned Plan					
	b	As per Completed Building Plan					
6	**Floor Area (m^2)**						
	a	As per Sanctioned Plan					
	b	As per Completed Building Plan					
7	**Parking Area (m^2)**						
	a	As per Sanctioned Plan					
	b	As per Completed Building Plan					
8	**Setbacks (m)**		Front	Rear	Side I	Side II	
	a	As per Sanctioned Plan					

	b	As per Completed Building Plan				
	c	Extent of deviation in %				
	d	Fine Paid (Rs)				
9	**Height (m)**		As per Sanctioned Plan		As per Completed Building Plan	

To
Sri / Smt………………………………….

Commissioner

R. KARIKAL VALAVEN
PRINCIPAL SECRETARY TO GOVERNMENT